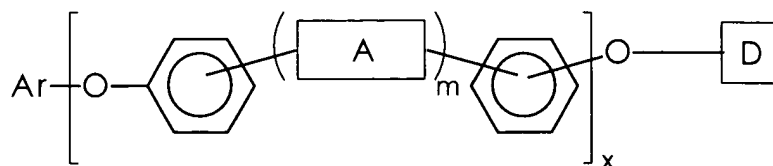
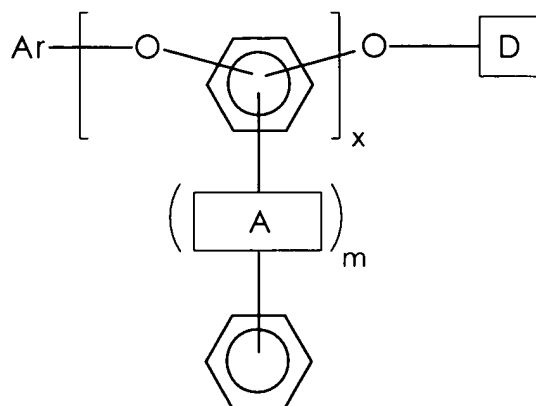


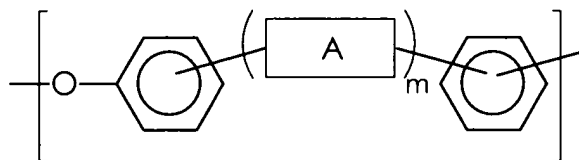
1. A branched polyarylene ether copolymer which comprises a plurality of branch points, each branch point being of the formula



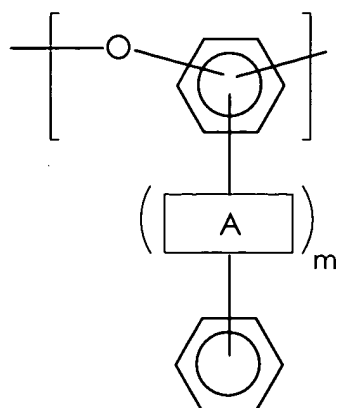
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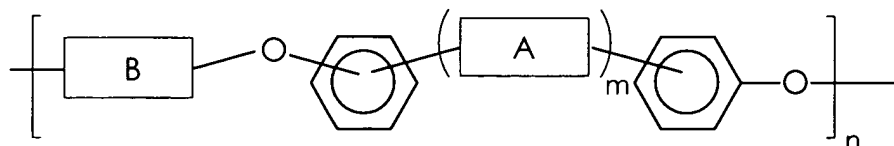
wherein each Ar, independently of the others, is an aryl moiety or an alkylaryl moiety, provided that when Ar is an alkylaryl moiety at least three



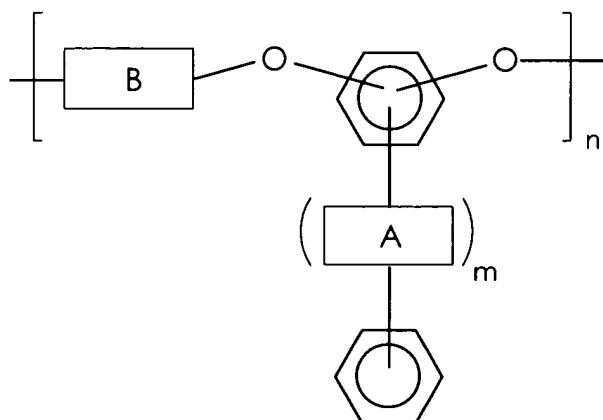
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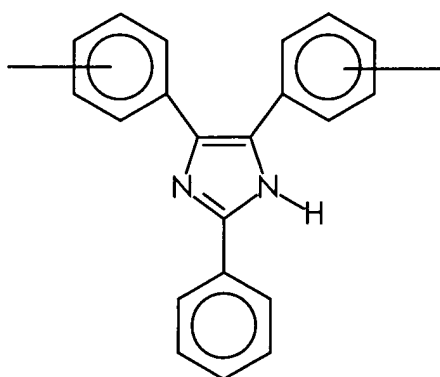
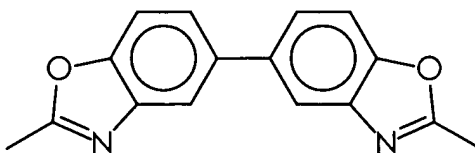
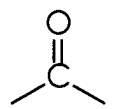
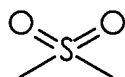
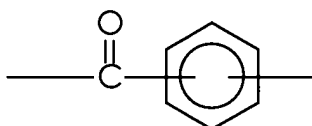
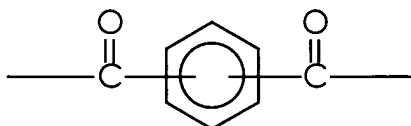
repeating groups are bonded to an aryl portion thereof through the oxygen atoms in the repeating groups, each x , independently of the others, is an integer of 3 or greater, each m , independently of the others, is an integer of 0 or 1, each D , independently of the others, is either (a) another branch point, (b) a terminal group, or (c) of the formula

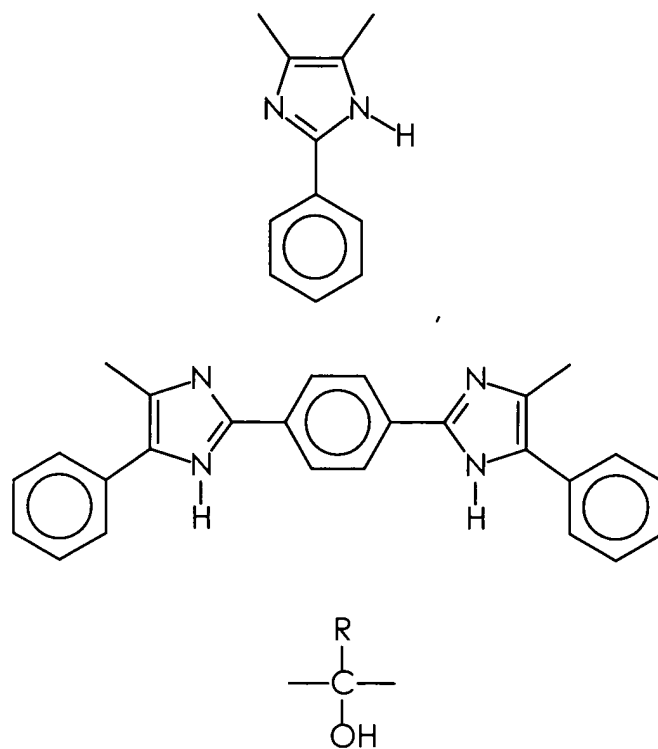


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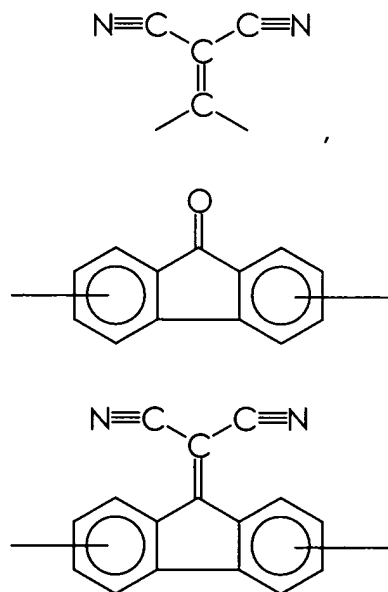


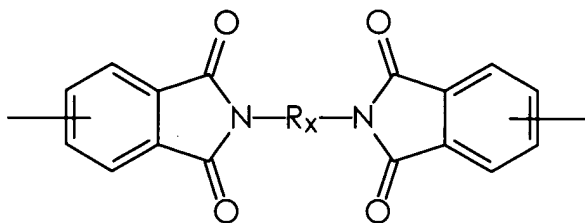
wherein each n, independently of the others, is an integer representing the number of repeat monomer units, each A, independently of the others, is



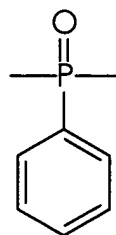
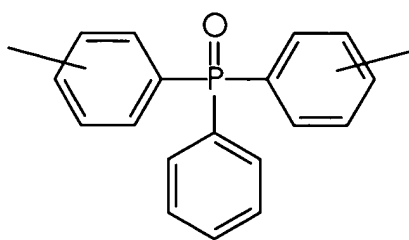


wherein R is a hydrogen atom, an alkyl group, an aryl group, an arylalkyl group, an alkylaryl group, or mixtures thereof,

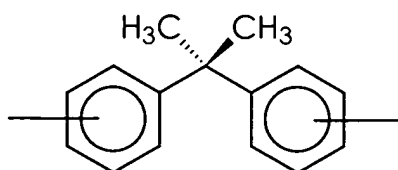
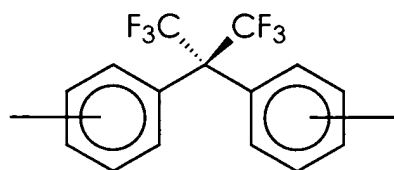


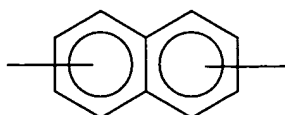
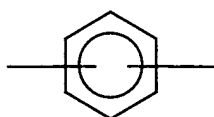
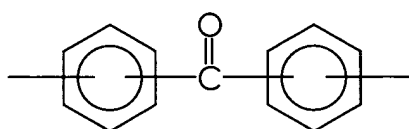
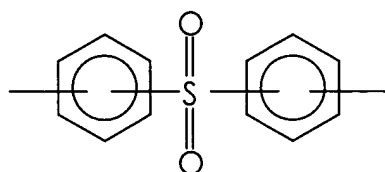
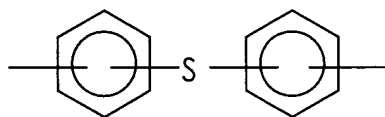
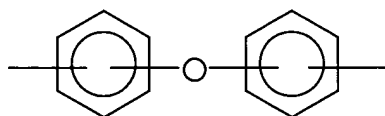
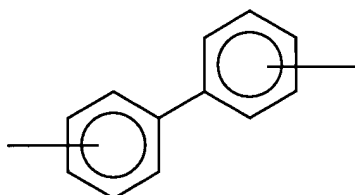
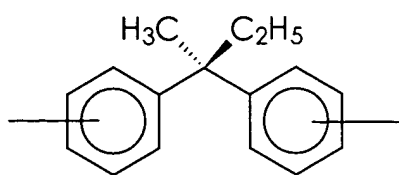


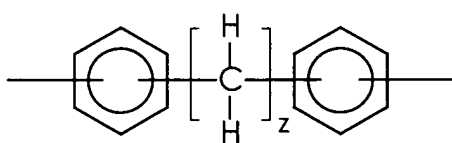
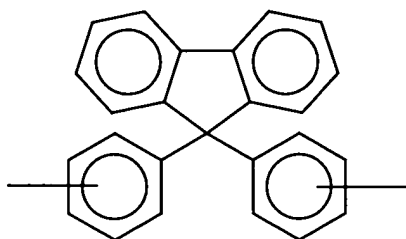
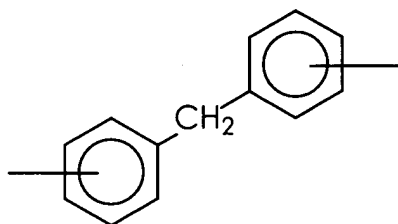
wherein R_x is an alkylene group, an arylene group, an arylalkylene group, an alkylarylene group, or mixtures thereof,



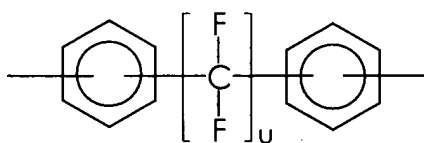
or mixtures thereof, each B, independently of the others, is



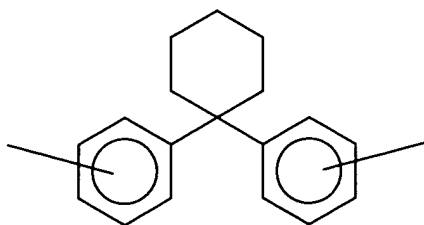
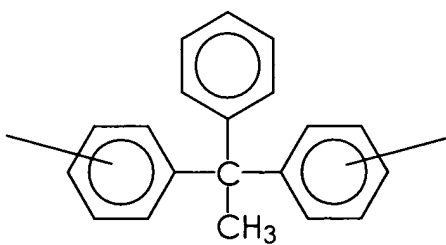


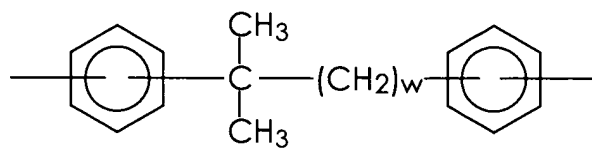
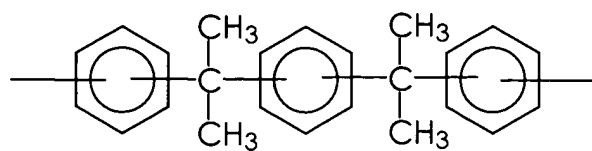


wherein z is an integer of from 2 to about 20,

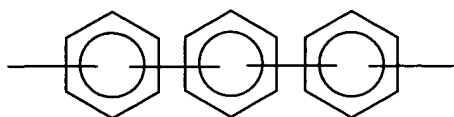
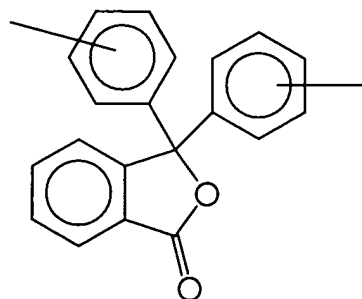
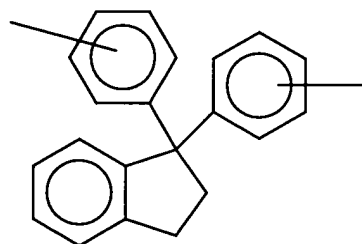
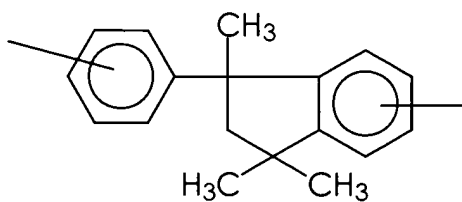


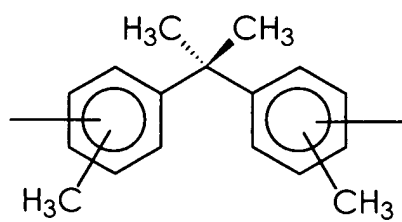
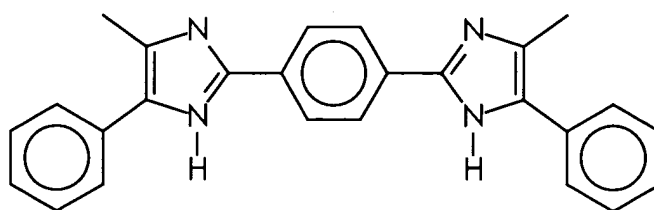
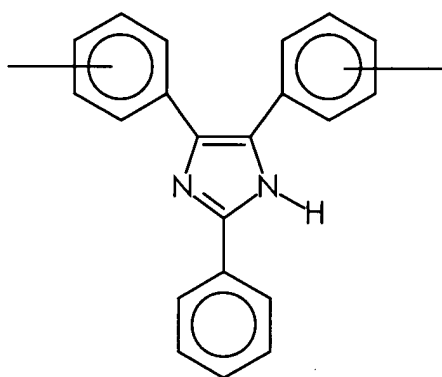
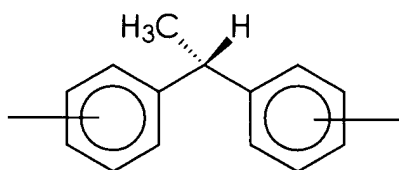
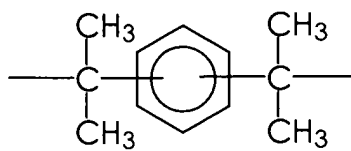
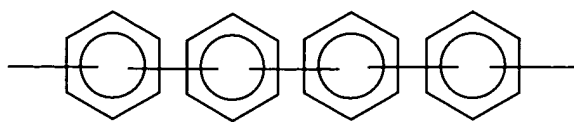
wherein u is an integer of from 1 to about 20,

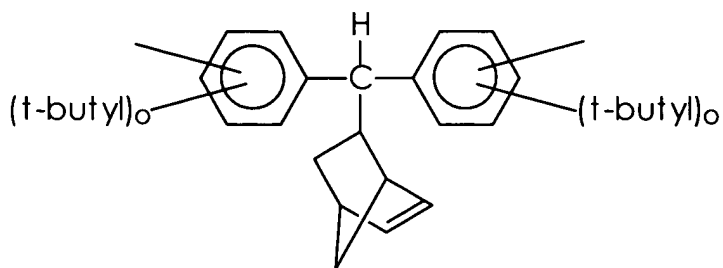




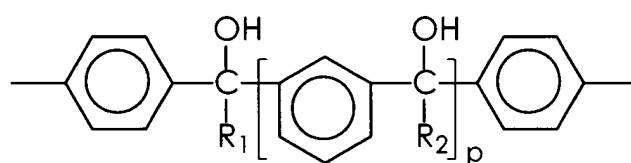
wherein w is an integer of from 1 to about 20,



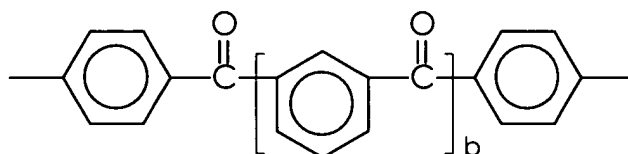




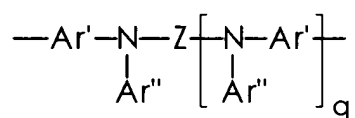
wherein each o , independently of the other, is an integer of 1, 2, 3, or 4,



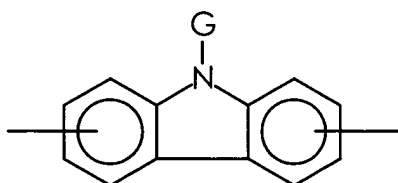
wherein R_1 and R_2 each, independently of the other, are hydrogen atoms, alkyl groups, aryl groups, arylalkyl groups, alkylaryl groups, or mixtures thereof, and p is an integer of 0 or 1,

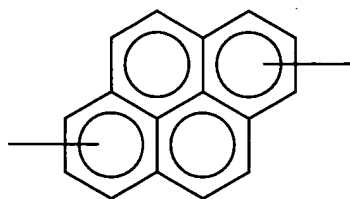
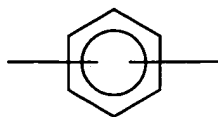


wherein b is an integer of 0 or 1,

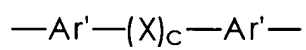


wherein (1) Z is

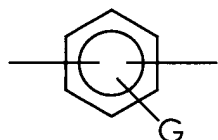
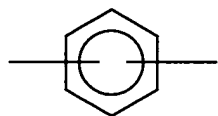




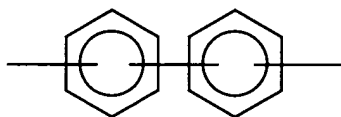
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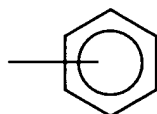
wherein c is 0 or 1; (2) Ar' is

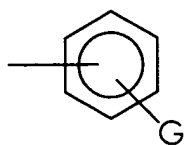


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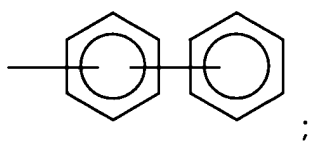


(3) G is an alkyl group selected from alkyl groups containing from about 2 to about 10 carbon atoms; (4) Ar'' is

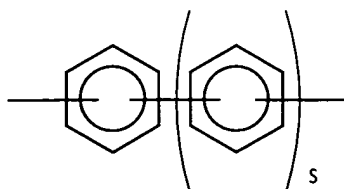
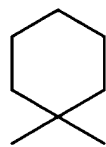
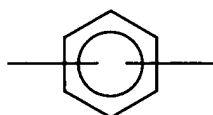
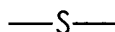
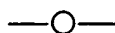
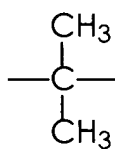
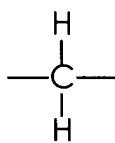




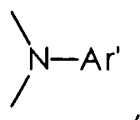
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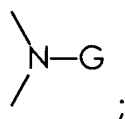
(5) X is



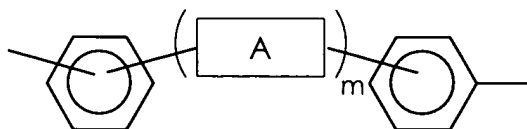
wherein s is 0, 1, or 2,



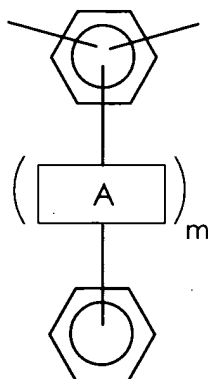
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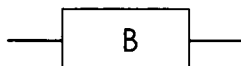
and (6) q is 0 or 1; or mixtures thereof, and wherein



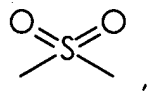
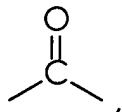
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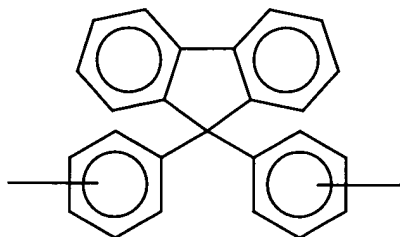
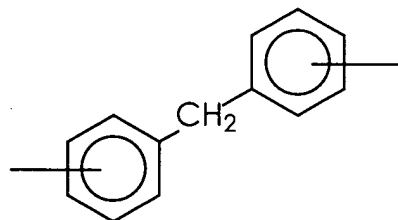
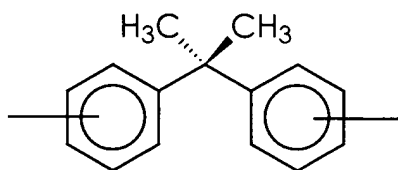
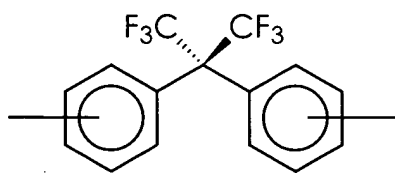
is not the same as

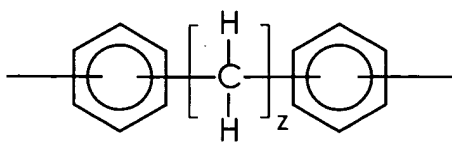


2. A polymer according to claim 1 wherein each A, independently of the others, is

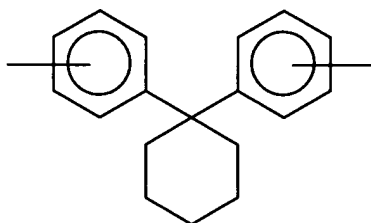


or a mixture thereof and each B, independently of the others, is



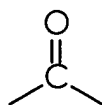


wherein z is an integer of from 2 to about 20,

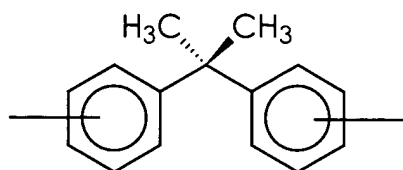


or a mixture thereof.

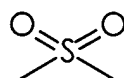
3. A polymer according to claim 1 wherein A is



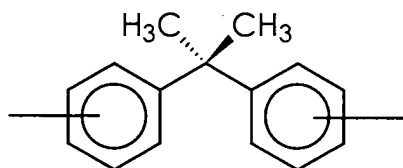
and B is



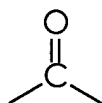
4. A polymer according to claim 1 wherein A is



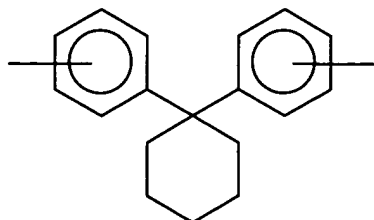
and B is



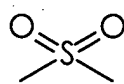
5. A polymer according to claim 1 wherein A is



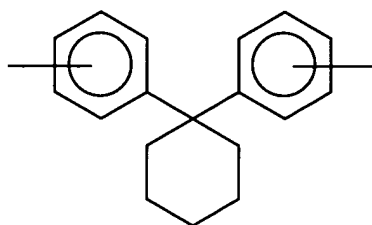
and B is



6. A polymer according to claim 1 wherein A is



and B is



7. A polymer according to claim 1 wherein Ar is a substituted aryl group or a substituted arylalkyl group.

8. A polymer according to claim 1 wherein Ar is an unsubstituted aryl group or an unsubstituted arylalkyl group.

9. A polymer according to claim 1 wherein Ar is an aryl group having one or more hetero atoms therein or an arylalkyl group having one or more hetero atoms therein.

10. A polymer according to claim 9 wherein the one or more hetero atoms is oxygen, nitrogen, sulfur, silicon, phosphorus, or a mixture thereof.

11. A polymer according to claim 1 wherein Ar is an aryl group having no hetero atoms therein or an arylalkyl group having no hetero atoms therein.

12. A polymer according to claim 1 having phenol terminal groups.

13. A polymer according to claim 1 having terminal groups of the formula

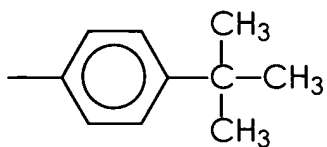


or

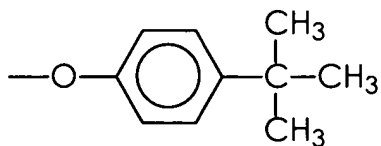


wherein a is an integer of from 1 to 5 and R' is a hydrogen atom, an alkyl group, an aryl group, an arylalkyl group, an alkylaryl group, or a mixture thereof, and wherein two or more R' groups can be joined together to form a ring.

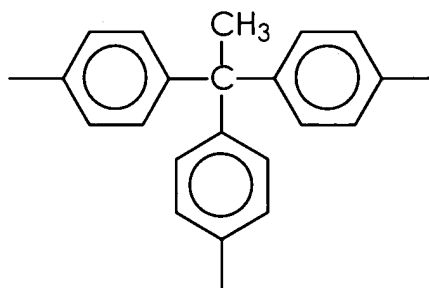
14. A polymer according to claim 1 having terminal groups of the formula



or



15. A polymer according to claim 1 wherein x is 3 and Ar is



16. A polymer according to claim 1 wherein x is 3.

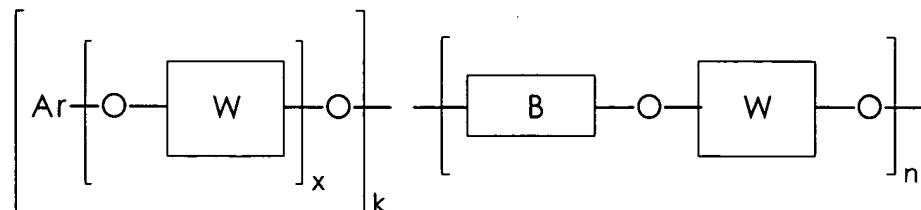
17. A polymer according to claim 1 having a weight average molecular weight of at least about 2,000.

18. A polymer according to claim 1 having a weight average molecular weight of no more than about 500,000.

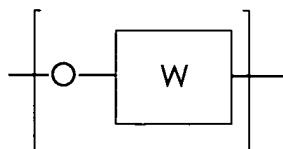
19. A polymer according to claim 1 having a number average molecular weight of at least about 2,000.

20. A polymer according to claim 1 having a number average molecular weight of no more than about 500,000.

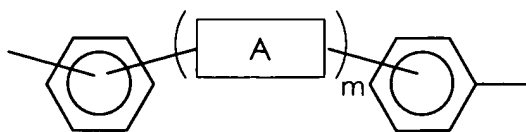
21. A branched polyarylene ether copolymer of the formula



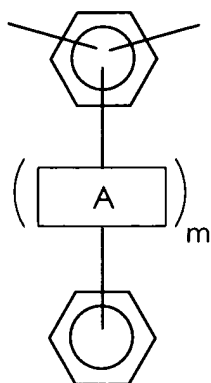
wherein each Ar, independently of the others, is an aryl moiety or an alkylaryl moiety, provided that when Ar is an alkylaryl moiety at least three



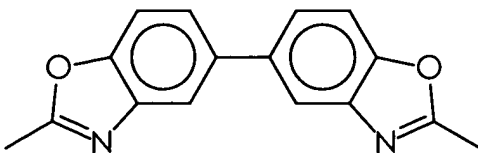
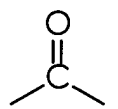
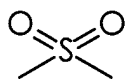
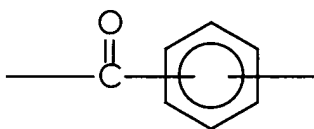
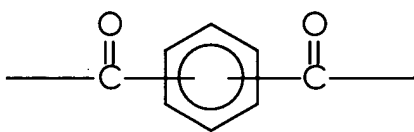
repeating groups are bonded to an aryl portion thereof through the oxygen atoms in the repeating groups, each x, independently of the others, is an integer of 3 or greater, each k and each n, independently of the others, are integers representing the number of repeat monomer units, each W, independently of the others, is

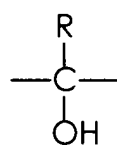
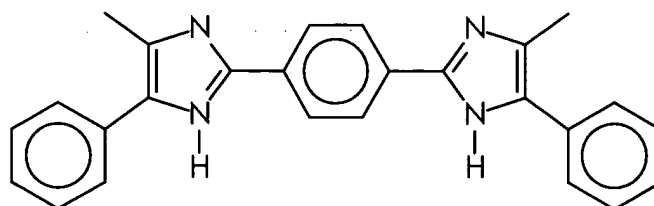
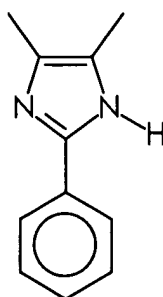
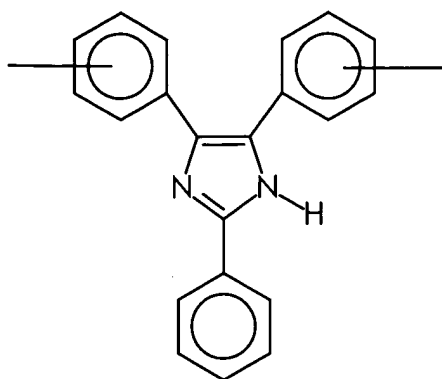


or

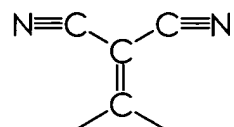


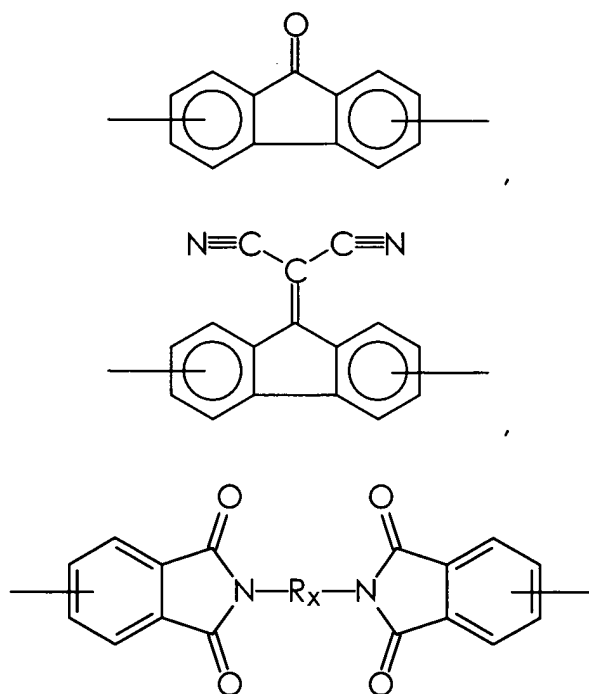
wherein each m , independently of the others, is an integer of 0 or 1,
each A , independently of the others, is



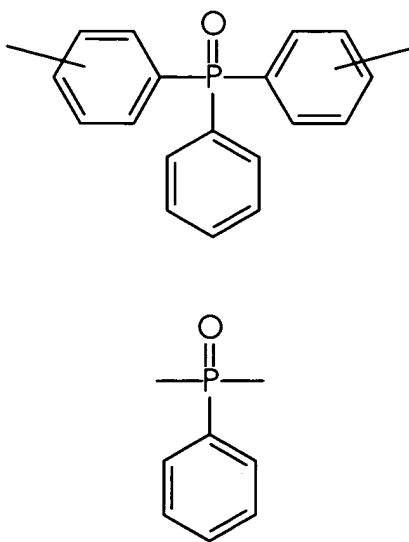


wherein R is a hydrogen atom, an alkyl group, an aryl group, an arylalkyl group, an alkylaryl group, or mixtures thereof,

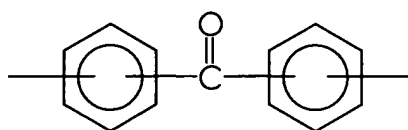
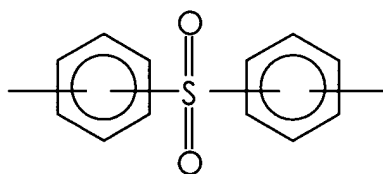
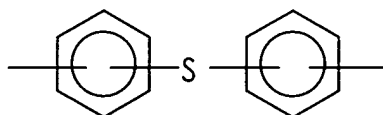
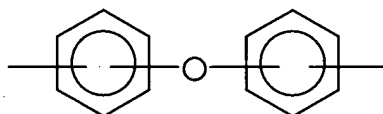
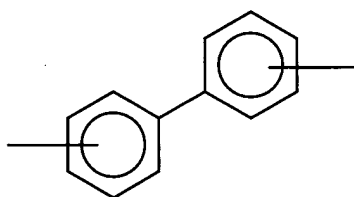
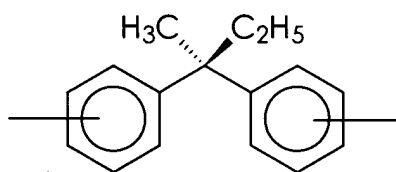
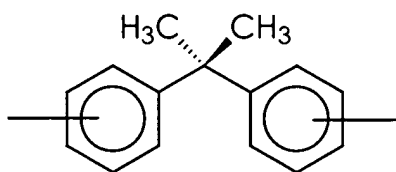
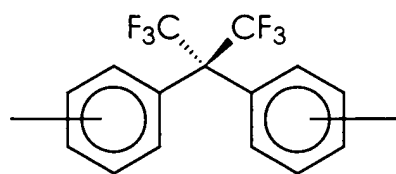


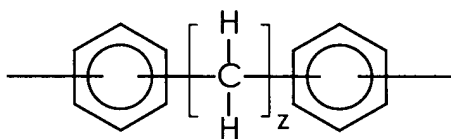
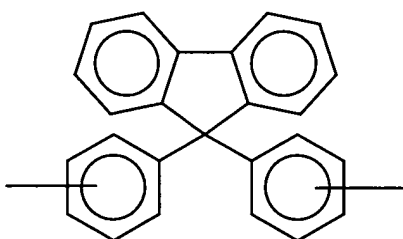
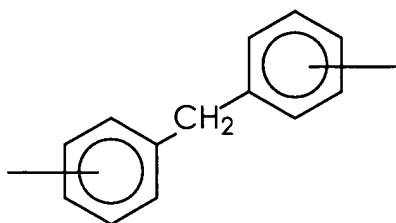
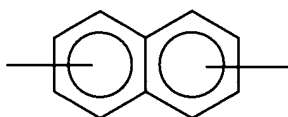
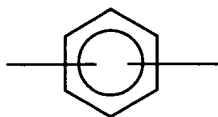


wherein R_x is an alkylene group, an arylene group, an arylalkylene group, an alkylarylene group, or mixtures thereof,

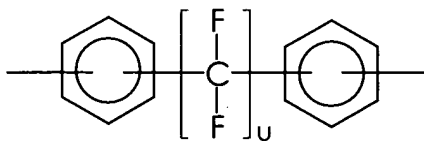


or mixtures thereof, each B, independently of the others, is

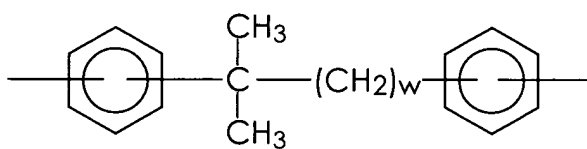
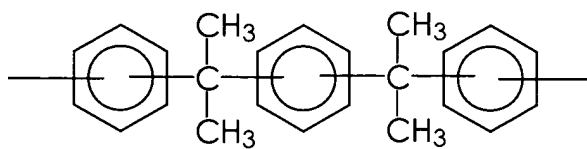
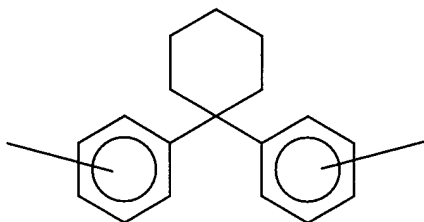
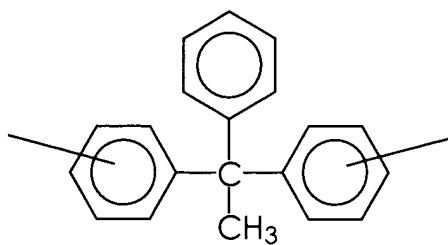




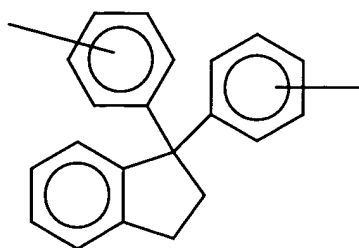
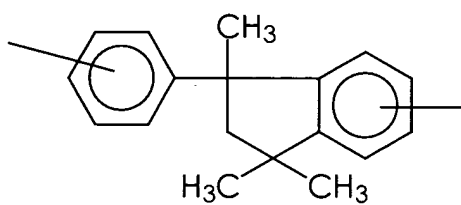
wherein z is an integer of from 2 to about 20,

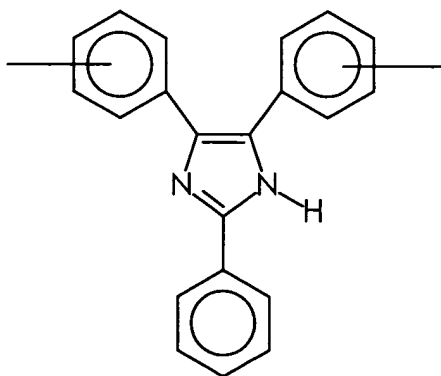
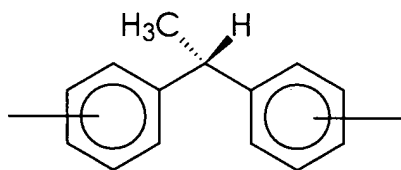
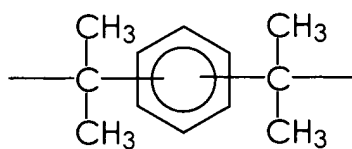
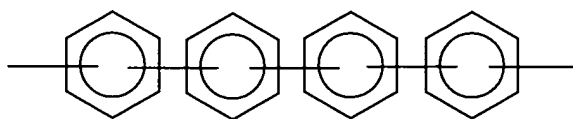
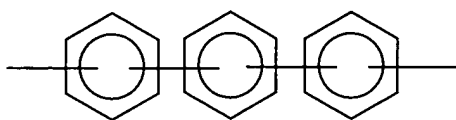
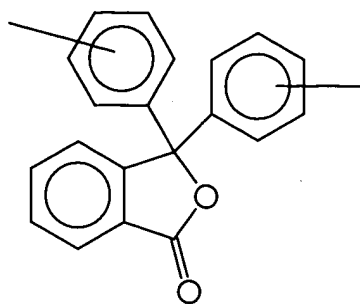


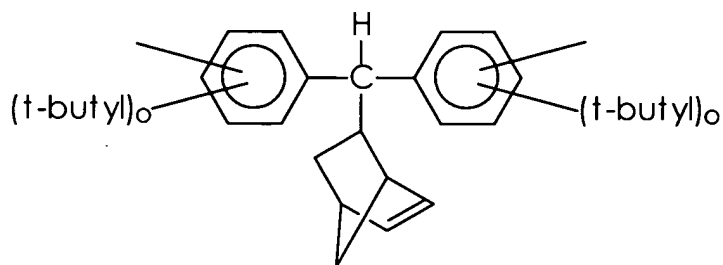
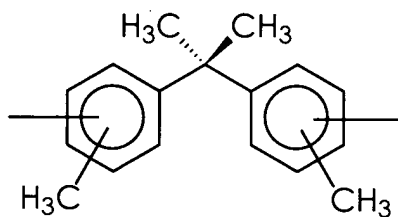
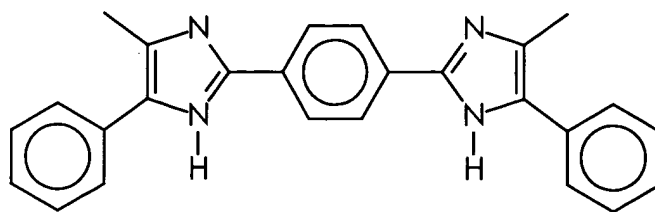
wherein u is an integer of from 1 to about 20,



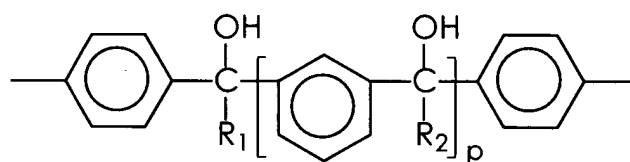
wherein w is an integer of from 1 to about 20,



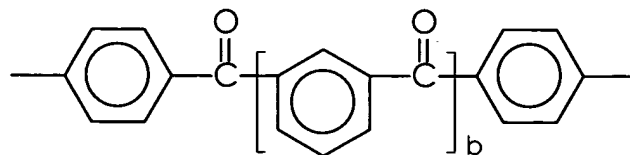




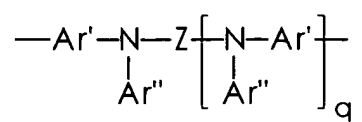
wherein each o , independently of the other, is an integer of 1, 2, 3, or 4,



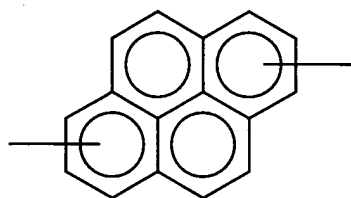
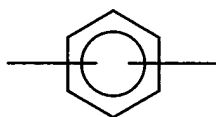
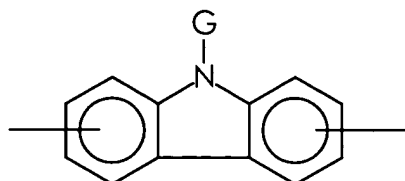
wherein R_1 and R_2 each, independently of the other, are hydrogen atoms, alkyl groups, aryl groups, arylalkyl groups, alkylaryl groups, or mixtures thereof, and p is an integer of 0 or 1,



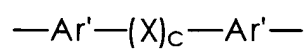
wherein b is an integer of 0 or 1,



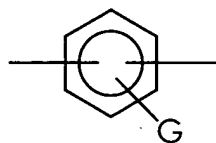
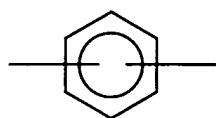
wherein (1) Z is



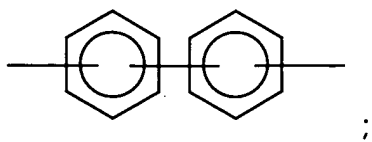
or



wherein c is 0 or 1; (2) Ar' is

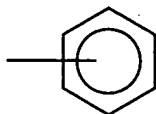


or

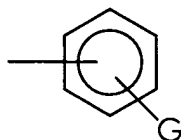


;

(3) G is an alkyl group selected from alkyl groups containing from about 2 to about 10 carbon atoms; (4) Ar'' is

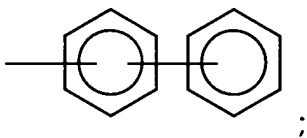


,



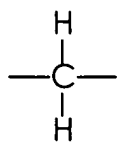
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or

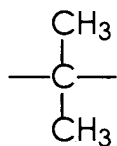


;

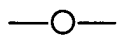
(5) X is



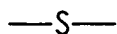
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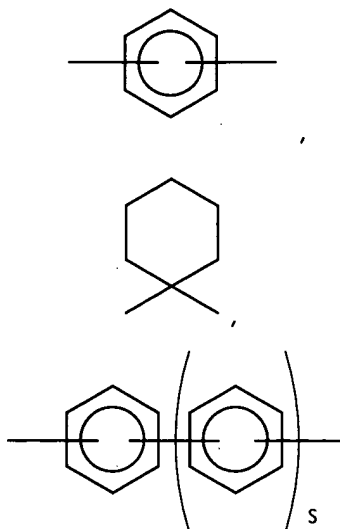
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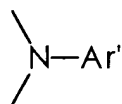
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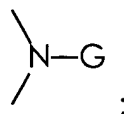
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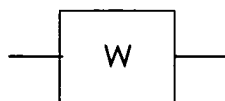
wherein s is 0, 1, or 2,



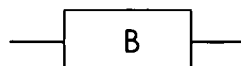
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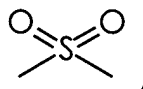
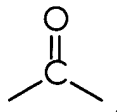
and (6) q is 0 or 1; or mixtures thereof, and wherein



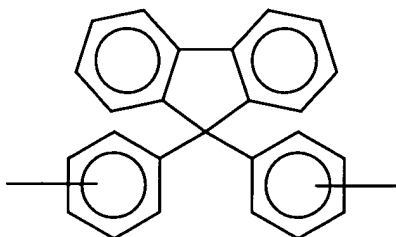
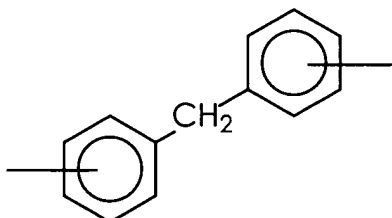
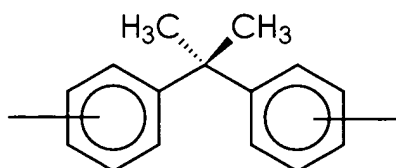
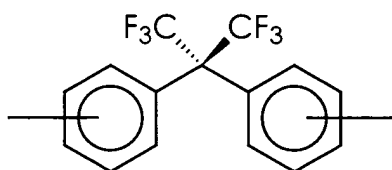
is not the same as

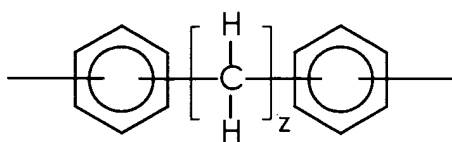


22. A polymer according to claim 21 wherein each A, independently of the others, is

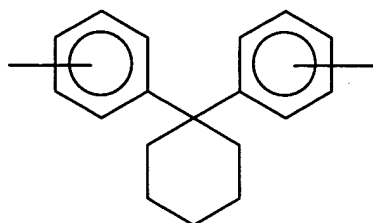


or a mixture thereof and each B, independently of the others, is



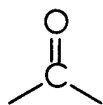


wherein z is an integer of from 2 to about 20,

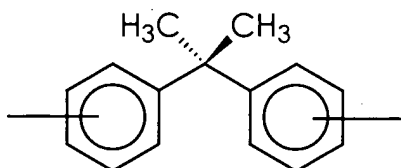


or a mixture thereof.

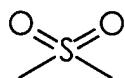
23. A polymer according to claim 21 wherein A is



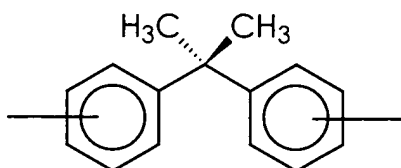
and B is



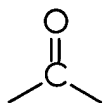
24. A polymer according to claim 21 wherein A is



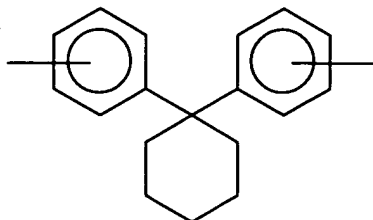
and B is



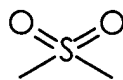
25. A polymer according to claim 21 wherein A is



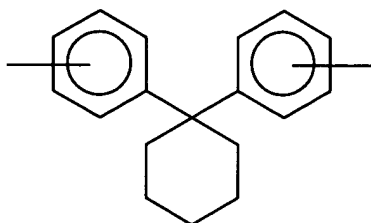
and B is



26. A polymer according to claim 21 wherein A is



and B is



27. A polymer according to claim 21 wherein Ar is a substituted aryl group or a substituted arylalkyl group.

28. A polymer according to claim 21 wherein Ar is an unsubstituted aryl group or an unsubstituted arylalkyl group.

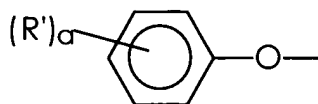
29. A polymer according to claim 21 wherein Ar is an aryl group having one or more hetero atoms therein or an arylalkyl group having one or more hetero atoms therein.

30. A polymer according to claim 29 wherein the one or more hetero atoms is oxygen, nitrogen, sulfur, silicon, phosphorus, or a mixture thereof.

31. A polymer according to claim 21 wherein Ar is an aryl group having no hetero atoms therein or an arylalkyl group having no hetero atoms therein.

32. A polymer according to claim 21 having phenol terminal groups.

33. A polymer according to claim 21 having terminal groups of the formula

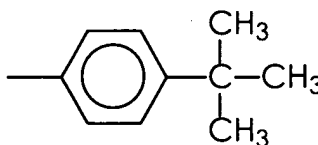


or

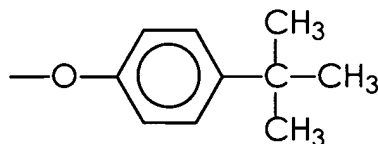


wherein a is an integer of from 1 to 5 and R' is a hydrogen atom, an alkyl group, an aryl group, an arylalkyl group, an alkylaryl group, or a mixture thereof, and wherein two or more R' groups can be joined together to form a ring.

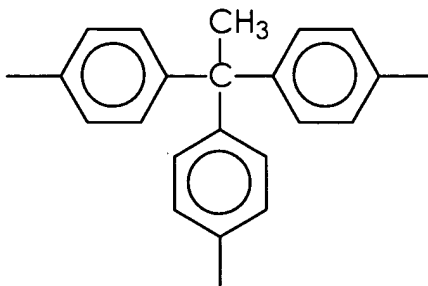
34. A polymer according to claim 21 having terminal groups of the formula



or



35. A polymer according to claim 21 wherein x is 3 and Ar is



36. A polymer according to claim 21 wherein x is 3.

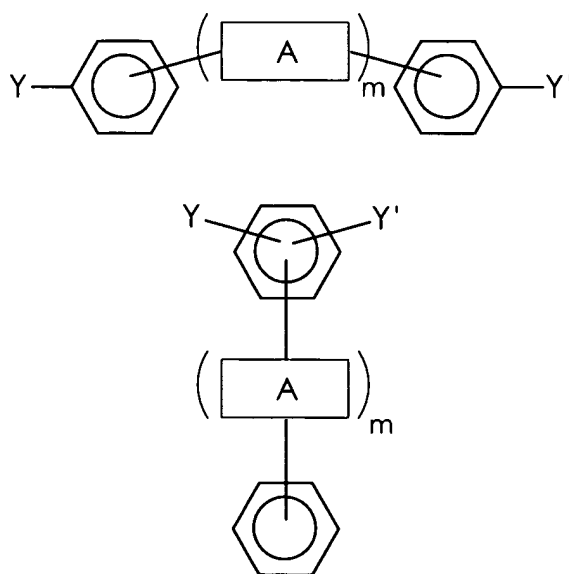
37. A polymer according to claim 21 having a weight average molecular weight of at least about 2,000.

38. A polymer according to claim 21 having a weight average molecular weight of no more than about 500,000.

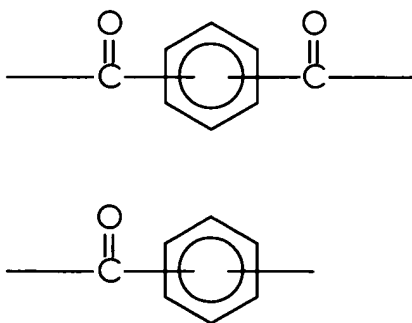
39. A polymer according to claim 21 having a number average molecular weight of at least about 2,000.

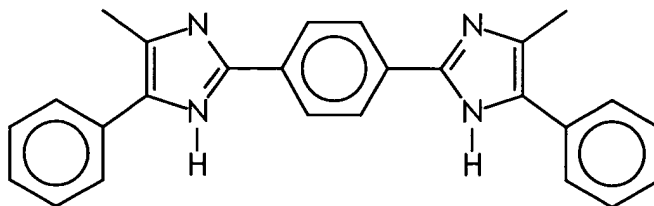
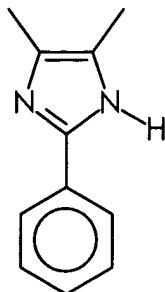
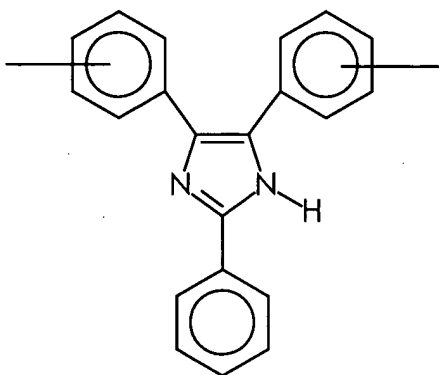
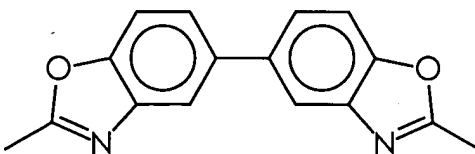
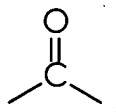
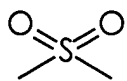
40. A polymer according to claim 21 having a number average molecular weight of no more than about 500,000.

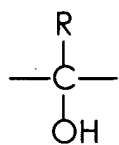
41. A process for preparing a branched polyarylene ether polymer which comprises (A) providing a reaction mixture comprising (i) an optional solvent, (ii) a polyfunctional phenol compound of the formula $\text{Ar}(\text{OH})_x$ wherein $x \geq 3$ and wherein Ar is an aryl moiety or an alkylaryl moiety, provided that when Ar is an alkylaryl moiety at least three of the -OH groups are bonded to an aryl portion thereof, (iii) a compound of the formula



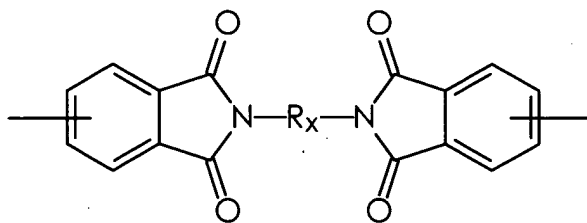
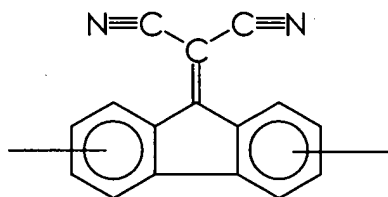
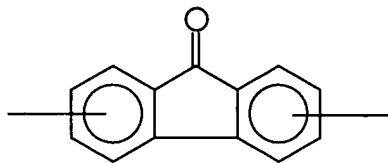
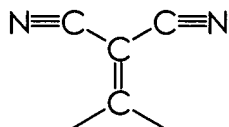
or a mixture thereof, wherein m is an integer of 0 or 1, Y and Y' each, independently of the other, is a fluorine atom or a chlorine atom, and A is



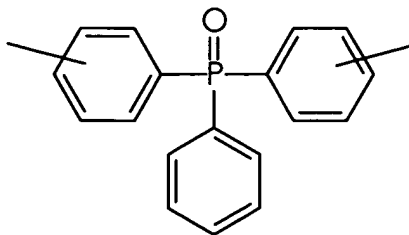


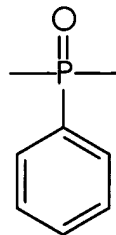


wherein R is a hydrogen atom, an alkyl group, an aryl group, an arylalkyl group, an alkylaryl group, or mixtures thereof,

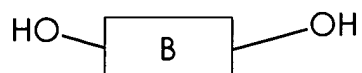


wherein Rx is an alkylene group, an arylene group, an arylalkylene group, an alkylarylene group, or mixtures thereof,

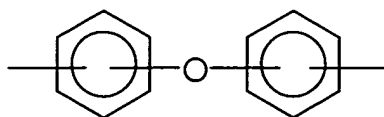
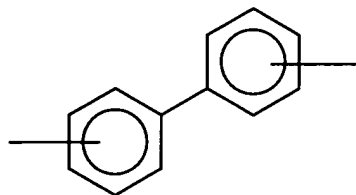
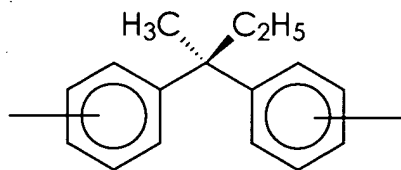
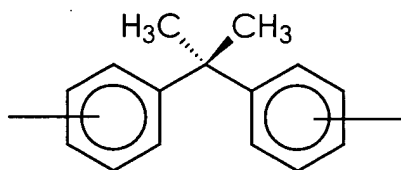
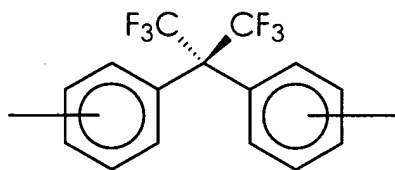


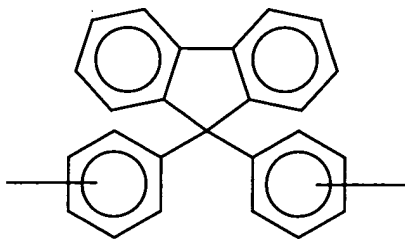
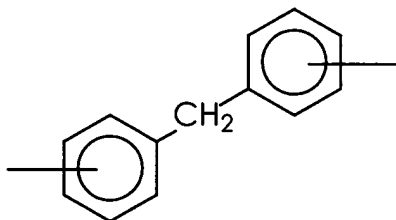
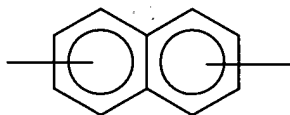
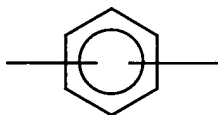
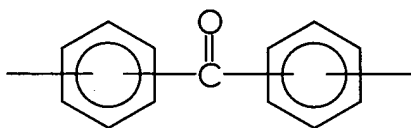
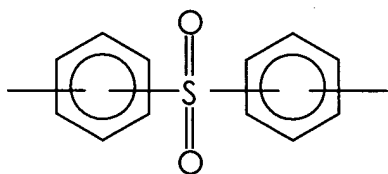
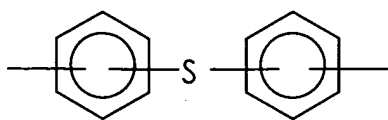


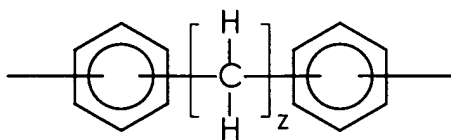
or mixtures thereof, (iv) a compound of the formula



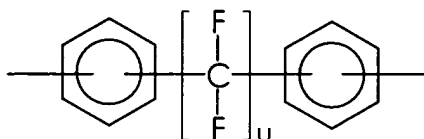
wherein B is



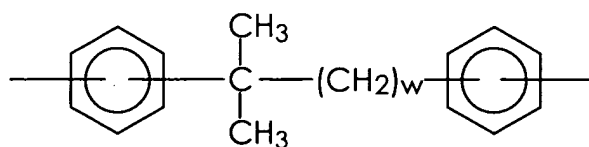
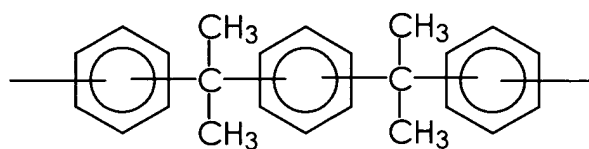
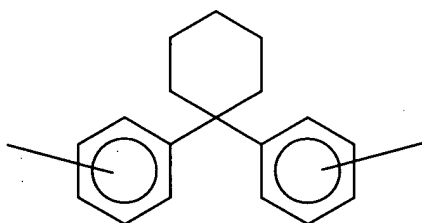
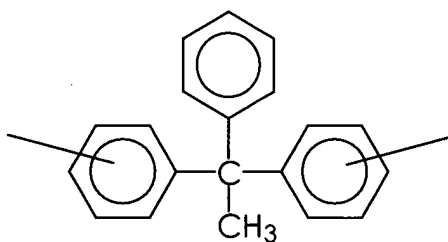




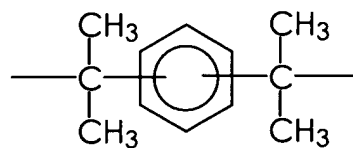
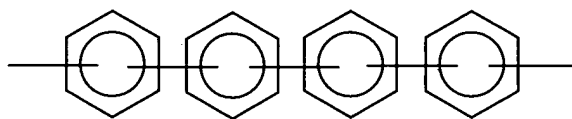
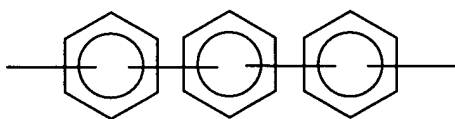
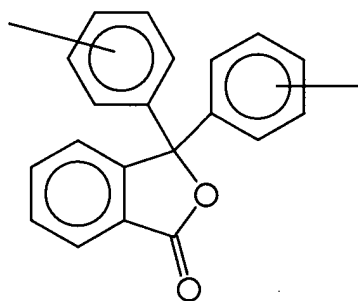
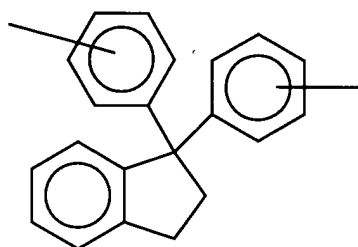
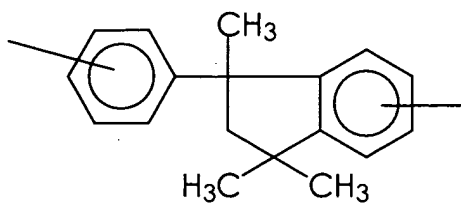
wherein z is an integer of from 2 to about 20,

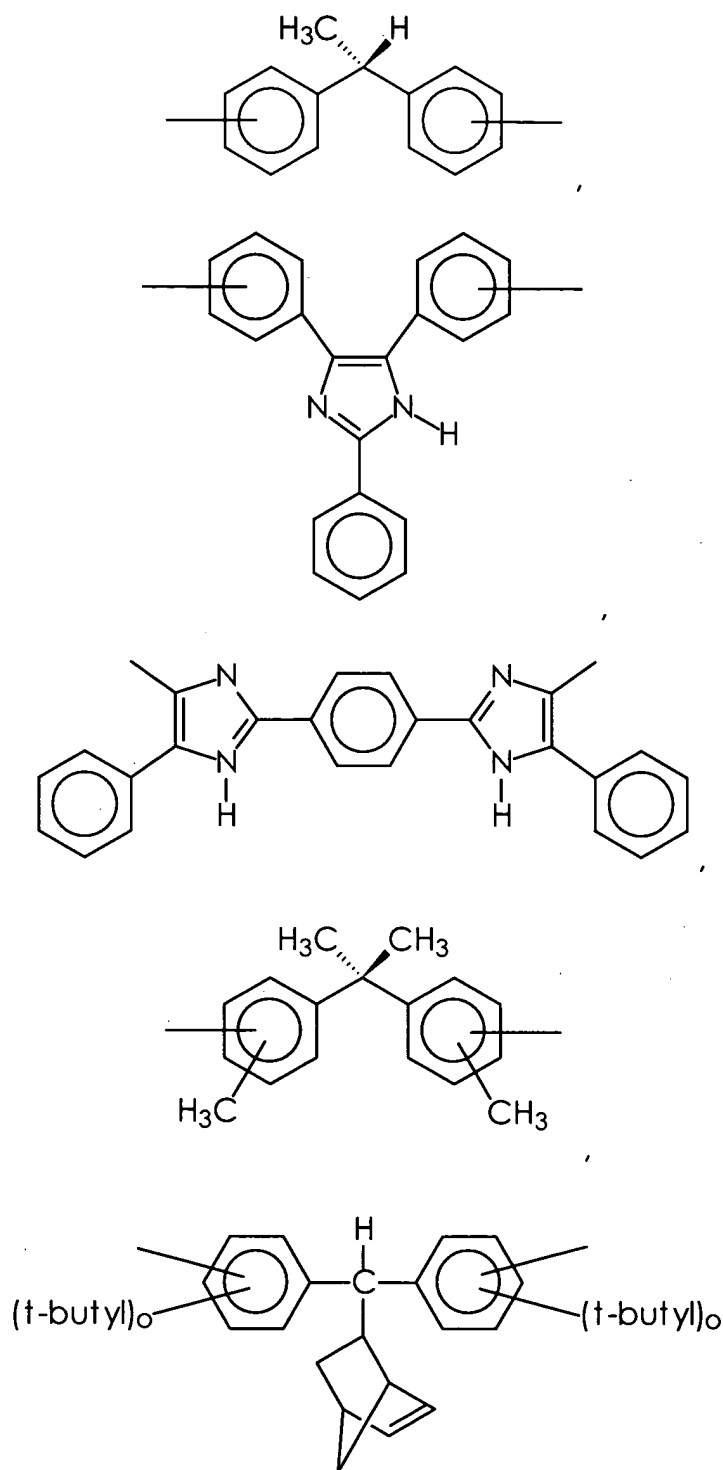


wherein u is an integer of from 1 to about 20,

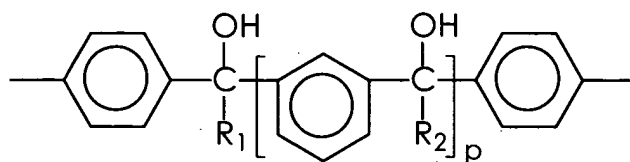


wherein w is an integer of from 1 to about 20,

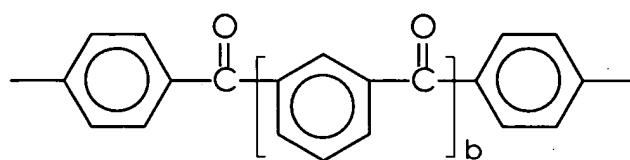




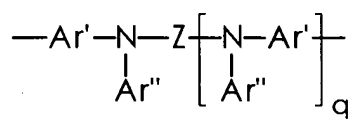
wherein each o , independently of the other, is an integer of 1, 2, 3, or 4,



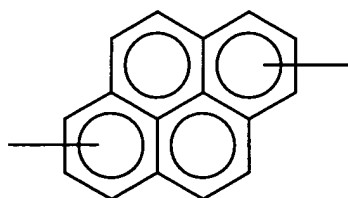
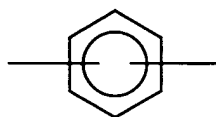
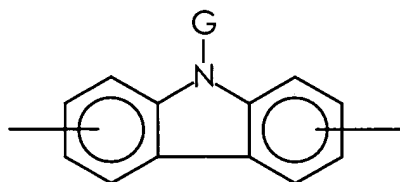
wherein R_1 and R_2 each, independently of the other, are alkyl groups, aryl groups, arylalkyl groups, alkylaryl groups, or mixtures thereof, and p is an integer of 0 or 1,



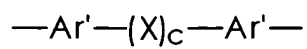
wherein b is an integer of 0 or 1,



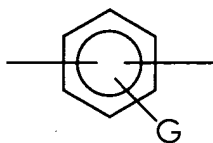
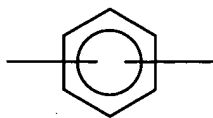
wherein (1) Z is



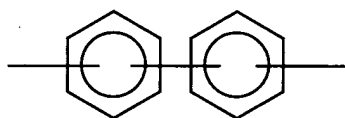
or



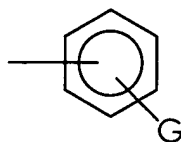
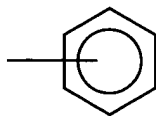
wherein c is 0 or 1; (2) Ar' is



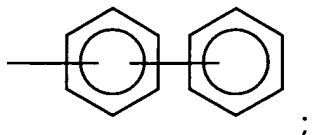
or



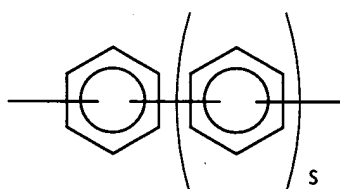
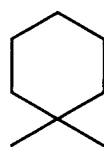
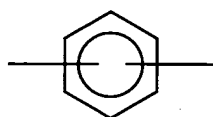
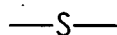
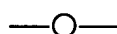
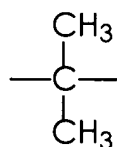
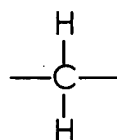
(3) G is an alkyl group selected from alkyl groups containing from about 2 to about 10 carbon atoms; (4) Ar'' is



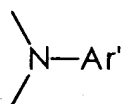
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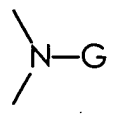
(5) X is



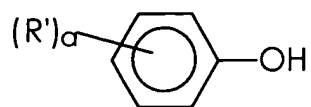
wherein s is 0, 1, or 2,



or

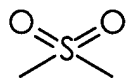
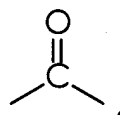


and (6) q is 0 or 1; or mixtures thereof, (v) optionally, a compound of the formula

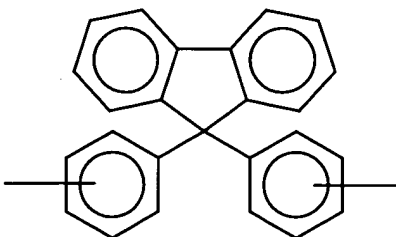
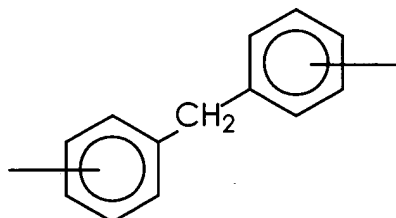
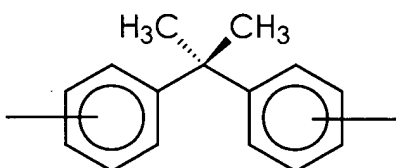
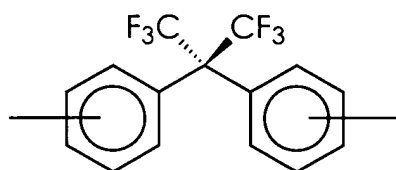


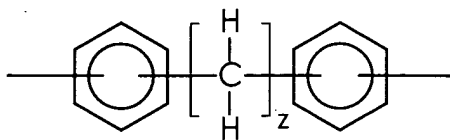
wherein a is an integer of from 1 to 5 and R' is a hydrogen atom, an alkyl group, an aryl group, an arylalkyl group, an alkylaryl group, or a mixture thereof, wherein two or more R' groups can be joined together to form a ring, and (vi) a carbonate base; and (B) heating the reaction mixture and removing generated water from the reaction mixture, thereby effecting a polymerization reaction.

42. A process according to claim 41 wherein each A, independently of the others, is

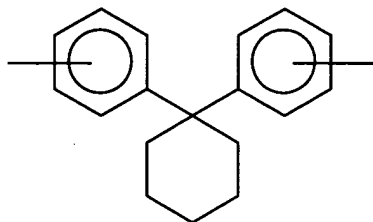


or a mixture thereof and each B, independently of the others, is



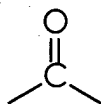


wherein z is an integer of from 2 to about 20,

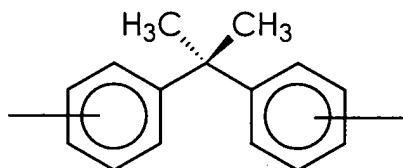


or a mixture thereof.

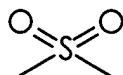
43. A process according to claim 41 wherein A is



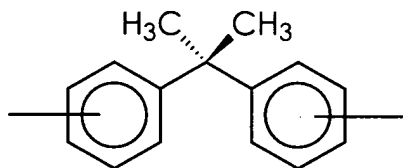
and B is



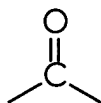
44. A process according to claim 41 wherein A is



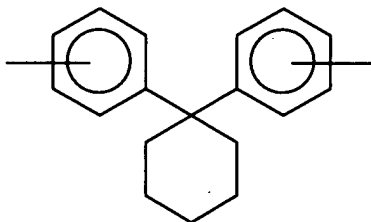
and B is



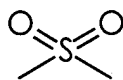
45. A process according to claim 41 wherein A is



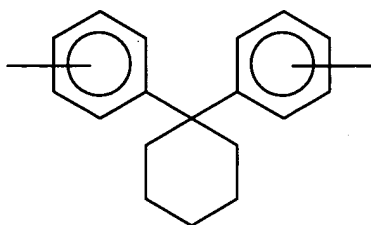
and B is



46. A process according to claim 41 wherein A is



and B is



47. A process according to claim 41 wherein Ar is a substituted aryl group or a substituted arylalkyl group.

48. A polymer according to claim 41 wherein Ar is an unsubstituted aryl group or an unsubstituted arylalkyl group.

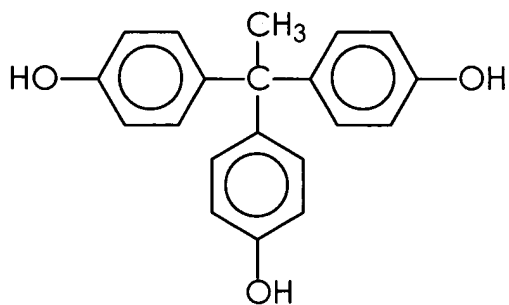
49. A polymer according to claim 41 wherein Ar is an aryl group having one or more hetero atoms therein or an arylalkyl group having one or more hetero atoms therein.

50. A polymer according to claim 49 wherein the one or more hetero atoms is oxygen, nitrogen, sulfur, silicon, phosphorus, or a mixture thereof.

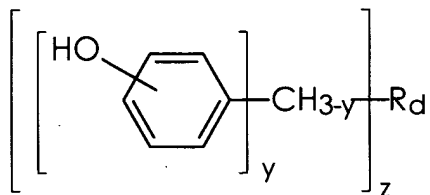
51. A polymer according to claim 41 wherein Ar is an aryl group having no hetero atoms therein or an arylalkyl group having no hetero atoms therein.

52. A process according to claim 41 wherein x is 3.

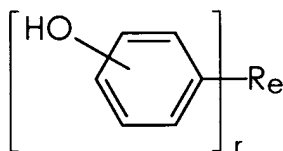
53. A process according to claim 41 wherein the polyfunctional phenol is



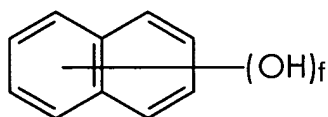
54. A process according to claim 41 wherein the polyfunctional phenol is (a) of the formula



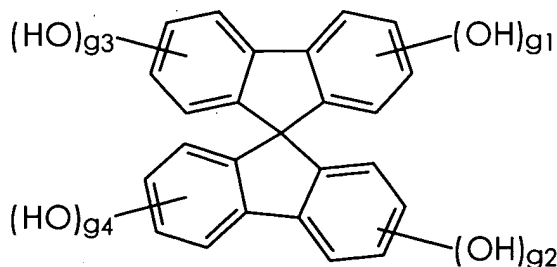
wherein y is an integer of 1, 2, or 3, z is an integer representing the number of HO- ϕ -CH_{3-y} groups on R_d, and R_d is a monovalent moiety; (b) of the formula



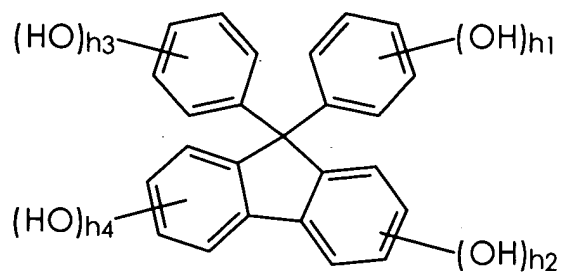
wherein r is an integer of at least about 3 and R_e is an alkyl group, an aryl group, an arylalkyl group, or an alkylaryl group, (c) of the formula



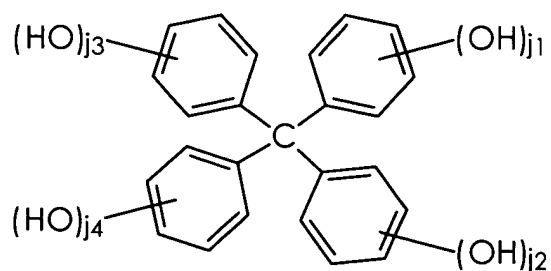
wherein f is an integer of at least 3, (d) of the formula



wherein g₁, g₂, g₃, and g₄ are each integers of 0, 1, 2, 3, or 4, provided that the sum of g₁+g₂+g₃+g₄ ≥ 3, (e) of the formula



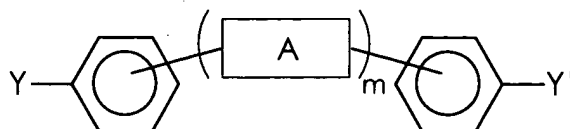
wherein h_1 , h_2 , h_3 , and h_4 are each integers of 0, 1, 2, 3, or 4, provided that the sum of $h_1+h_2+h_3+h_4 \geq 3$, (f) of the formula



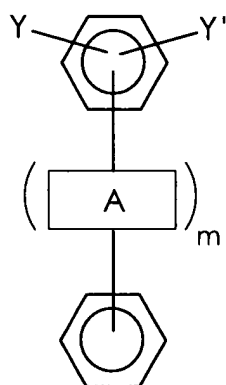
wherein j_1 , j_2 , j_3 , and j_4 are each integers of 0, 1, 2, 3, or 4, provided that the sum of $j_1+j_2+j_3+j_4 \geq 3$, or (g) mixtures thereof.

55. A process according to claim 41 wherein the polyfunctional phenol is 1,1,3-tris(2-methyl-4-hydroxy-5-tert-butylphenyl)butane, 3,3,3',3'-tetramethyl-1,1'-spirobisindane-5,5',6,6'-tetrol, pyrogallol, 1,2,4-benzenetriol, phloroglucinol dihydrate, dithranol, nordihydroguaiaretic acid, C-methylcalix[4]resorcinarene, C-undecylcalix[4]-resorcinarene monohydrate, catechin hydrate, epicatechin, or mixtures thereof.

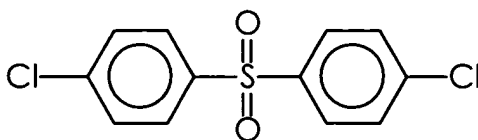
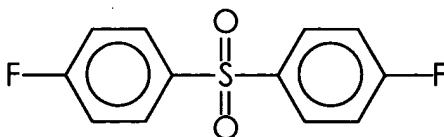
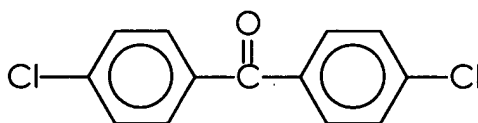
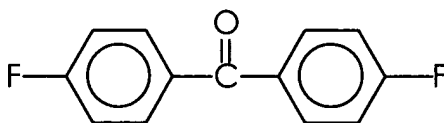
56. A process according to claim 41 wherein the compound of the formula



or

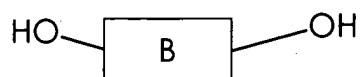


is

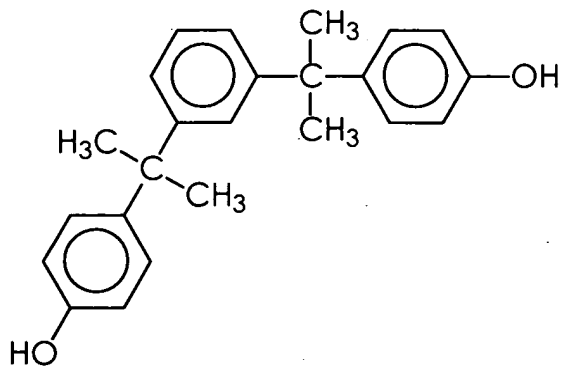
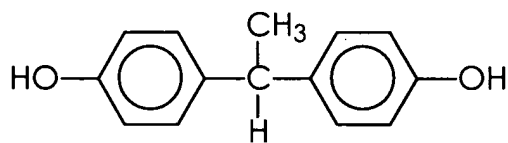
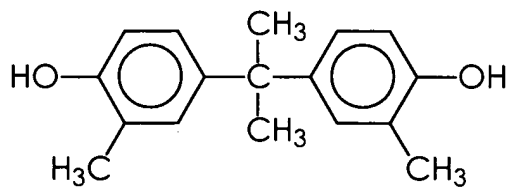
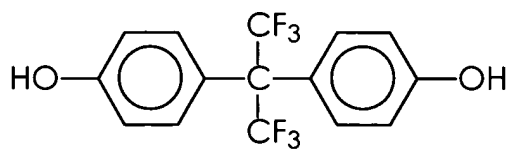
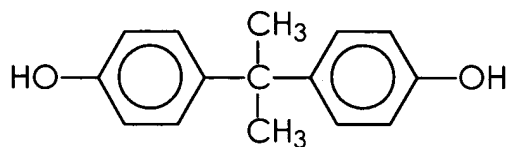


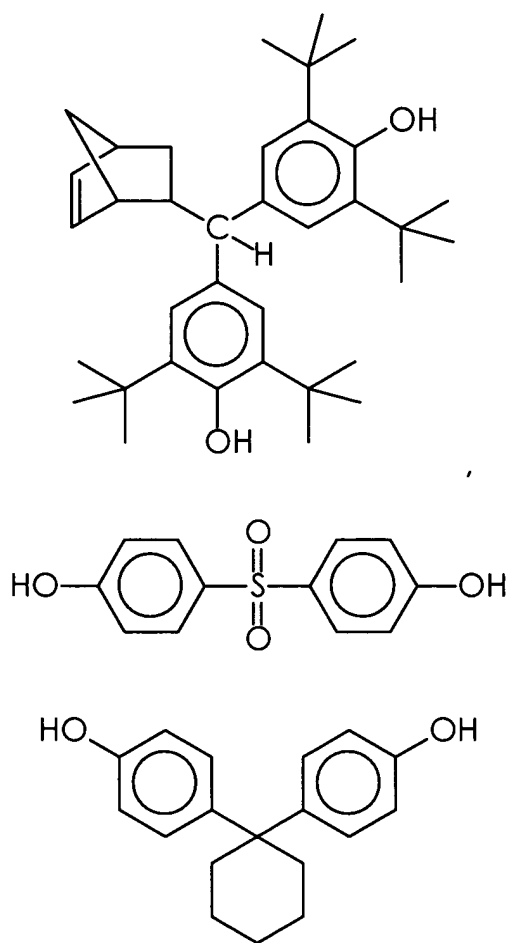
or mixtures thereof.

57. A process according to claim 41 wherein the compound of the formula



is





or mixtures thereof.

58. A process according to claim 41 wherein a solvent is present.

59. A process according to claim 58 wherein the solvent is N,N-dimethylacetamide, sulfolane, dimethyl formamide, dimethyl sulfoxide, N-methyl pyrrolidinone, hexamethylphosphoric triamide, or mixtures thereof.

60. A process according to claim 41 wherein the compound of the formula

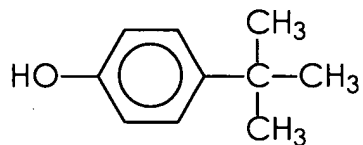


is present.

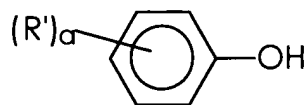
61. A process according to claim 60 wherein



is



62. A process according to claim 60 wherein



is a methyl phenol, an ethyl phenol, a propyl phenol, a butyl phenol, a pentyl phenol, a hexyl phenol, a heptyl phenol, an octyl phenol, a nonyl phenol, a decyl phenol, an undecyl phenol, a dodecyl phenol, a phenyl phenol, a tolyl phenol, a benzyl phenol, a methoxy phenol, an ethoxy phenol, a propoxy phenol, a butoxy phenol, a pentyloxy phenol, a hexyloxy phenol, a heptyloxy phenol, an octyloxy phenol, a nonyloxy phenol, a decyloxy phenol, an undecyloxy phenol, a dodecyloxy phenol, a phenoxy phenol, a tolyloxy phenol, a benzyloxy phenol, a (polyethyleneoxy) phenol, a (polypropyleneoxy) phenol, a (polybutyleneoxy) phenol, a naphthol, or a mixture thereof.

63. A process according to claim 41 wherein the carbonate base is lithium carbonate, sodium carbonate, potassium carbonate, cesium carbonate, or a mixture thereof.

64. A process according to claim 41 wherein the carbonate base is potassium carbonate.

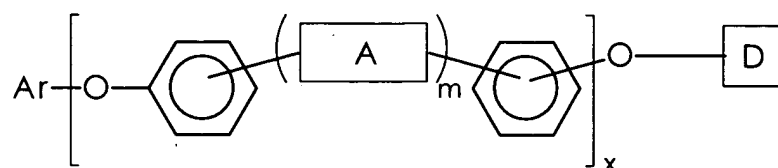
65. A process according to claim 41 wherein the carbonate base is cesium carbonate.

66. A process according to claim 41 wherein a solvent is present and wherein the reaction mixture is heated to reflux temperature.

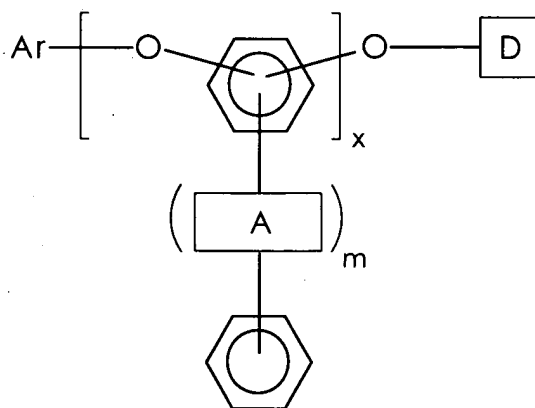
67. A process according to claim 41 wherein water is removed from the reaction mixture by azeotropic distillation.

68. A process according to claim 67 wherein the azeotropic distillation is carried out with toluene.

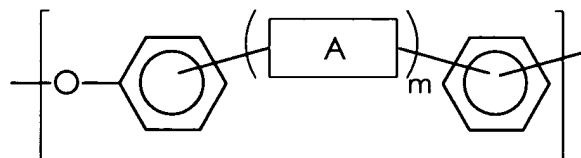
69. An imaging member which comprises a conductive substrate, a photogenerating material, and a binder comprising a branched polyarylene ether copolymer which comprises a plurality of branch points, each branch point being of the formula



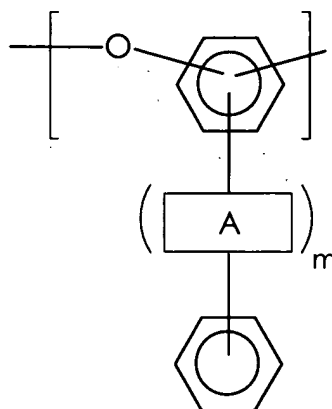
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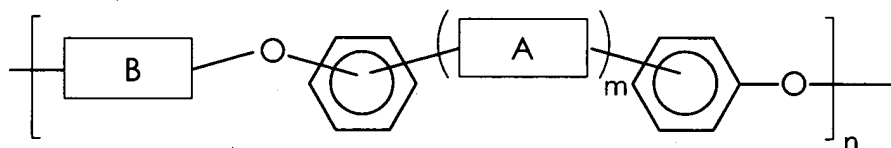
wherein each Ar, independently of the others, is an aryl moiety or an alkylaryl moiety, provided that when Ar is an alkylaryl moiety at least three



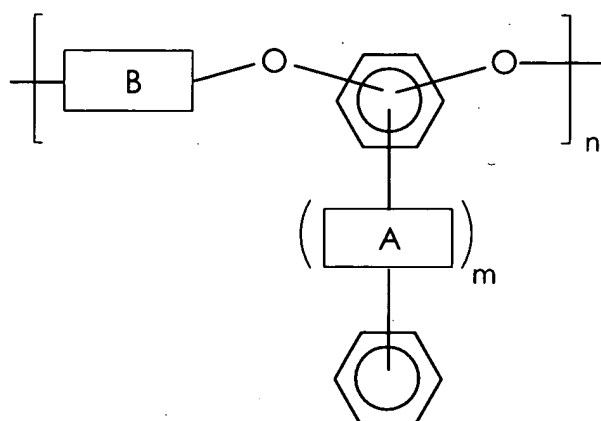
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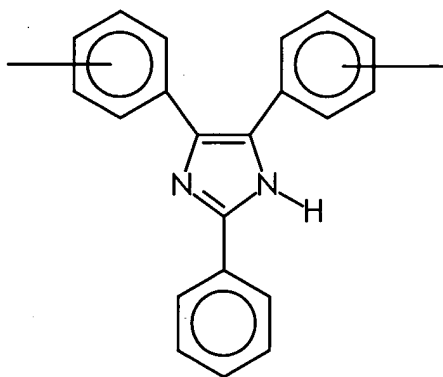
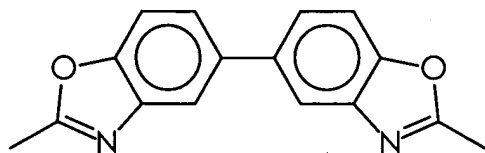
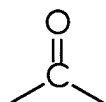
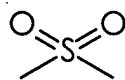
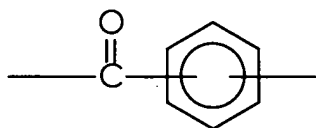
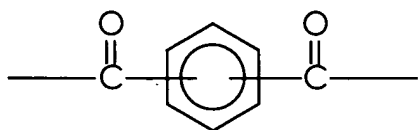
repeating groups are bonded to an aryl portion thereof through the oxygen atoms in the repeating groups, each x , independently of the others, is an integer of 3 or greater, each m , independently of the others, is an integer of 0 or 1, each D , independently of the others, is either (a) another branch point, (b) a terminal group, or (c) of the formula

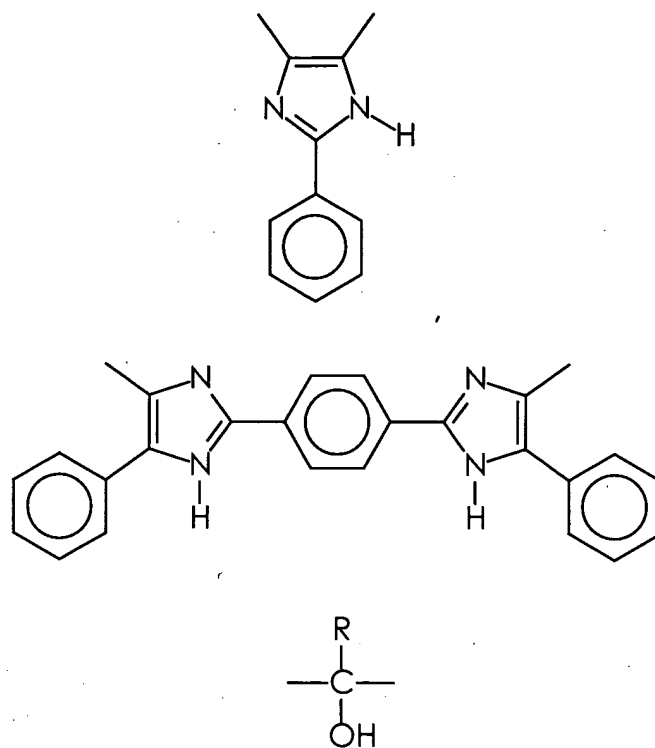


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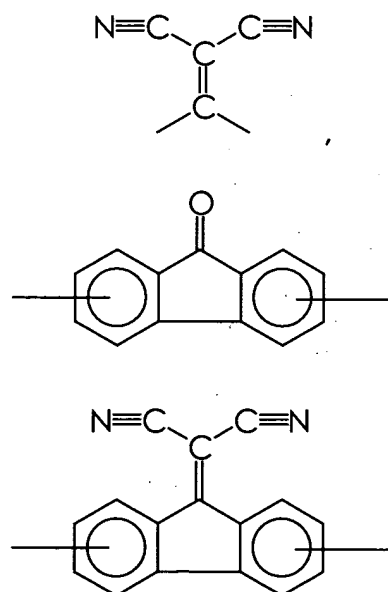


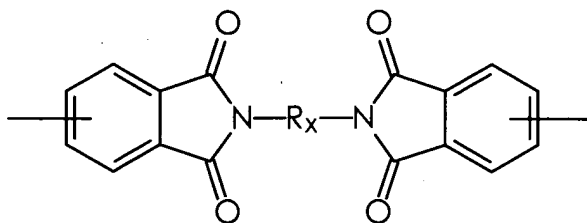
wherein each n, independently of the others, is an integer representing the number of repeat monomer units, each A, independently of the others, is



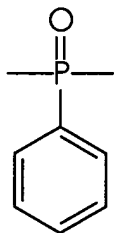
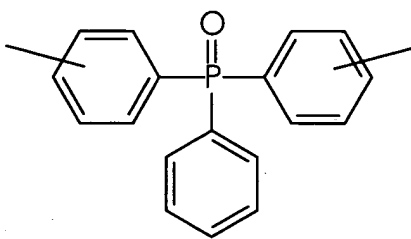


wherein R is a hydrogen atom, an alkyl group, an aryl group, an arylalkyl group, an alkylaryl group, or mixtures thereof,

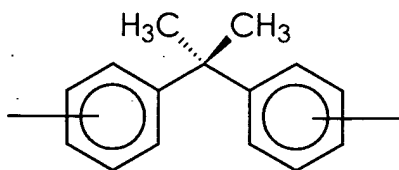
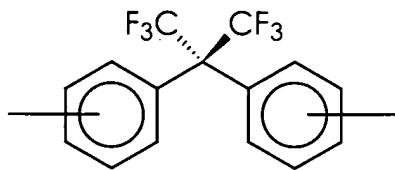


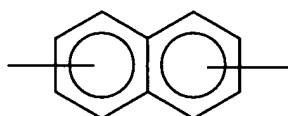
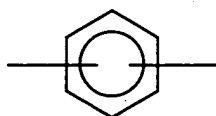
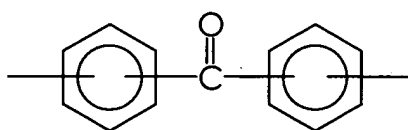
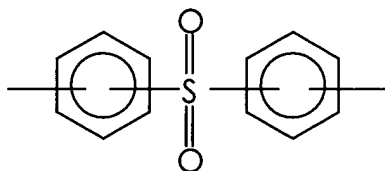
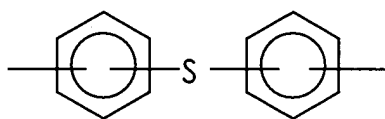
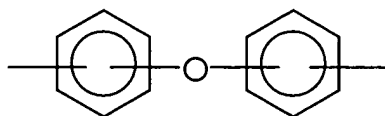
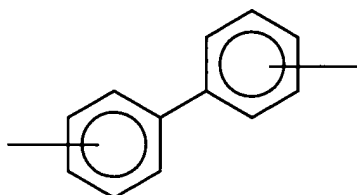
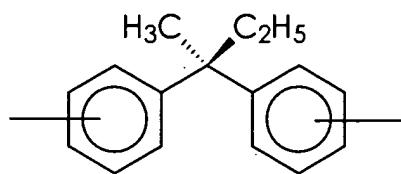


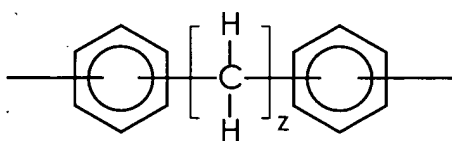
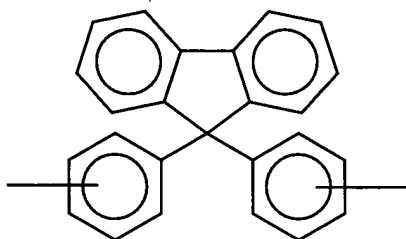
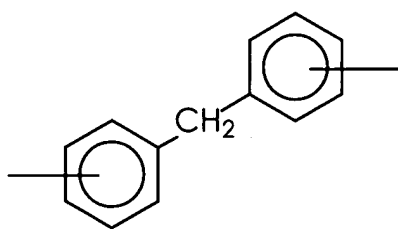
wherein R_x is an alkylene group, an arylene group, an arylalkylene group, an alkylarylene group, or mixtures thereof,



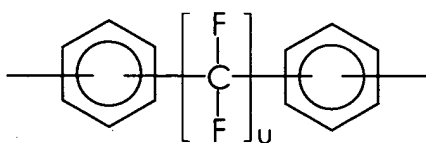
or mixtures thereof, each B, independently of the others, is



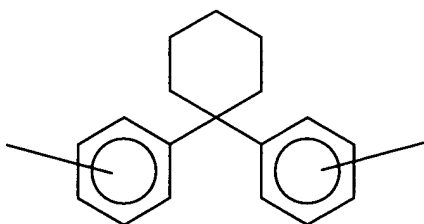
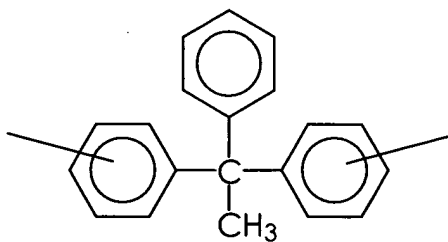


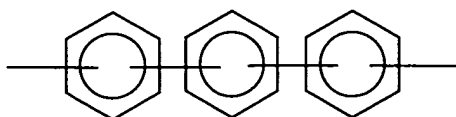
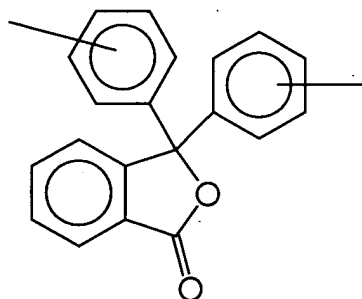
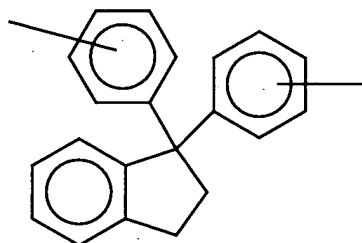
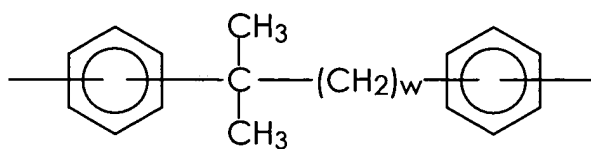


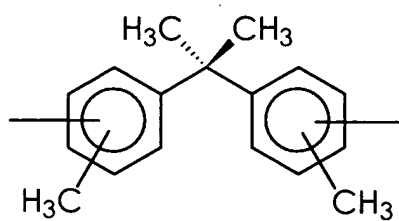
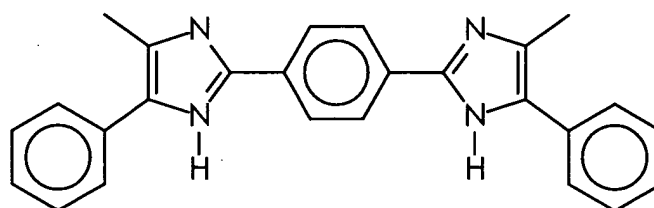
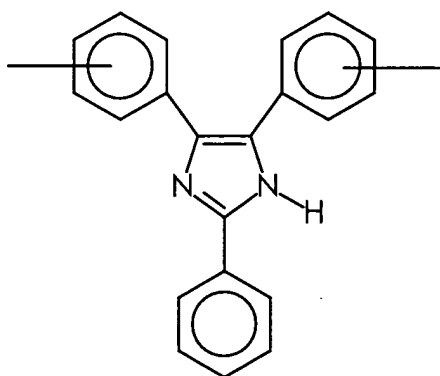
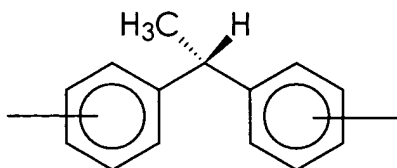
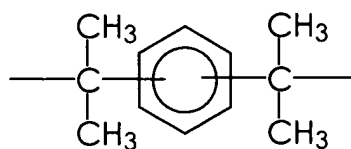
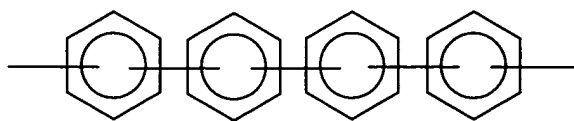
wherein z is an integer of from 2 to about 20,

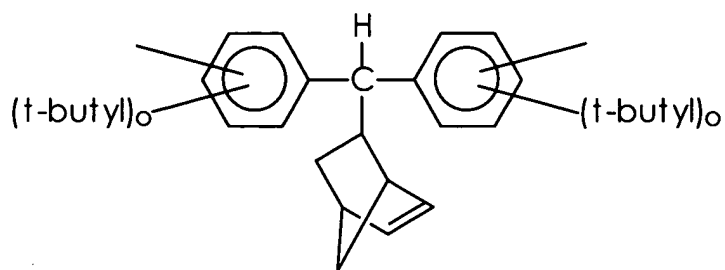


wherein u is an integer of from 1 to about 20,

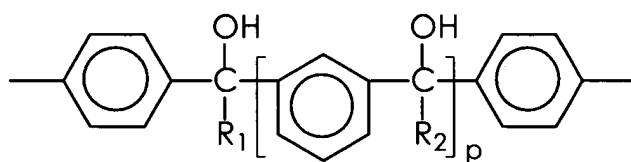




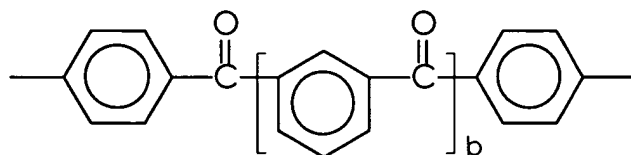




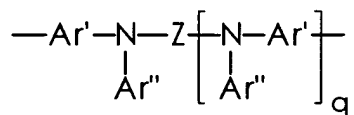
wherein each o , independently of the other, is an integer of 1, 2, 3, or 4,



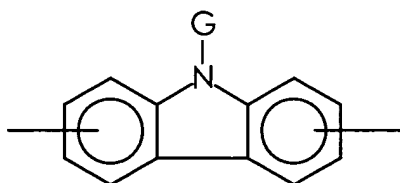
wherein R_1 and R_2 each, independently of the other, are hydrogen atoms, alkyl groups, aryl groups, arylalkyl groups, alkylaryl groups, or mixtures thereof, and p is an integer of 0 or 1,

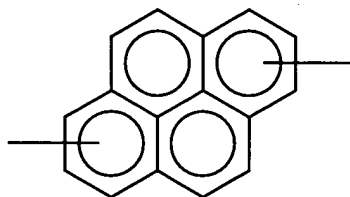
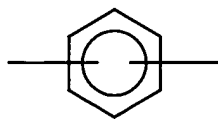


wherein b is an integer of 0 or 1,

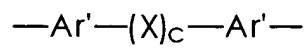


wherein (1) Z is

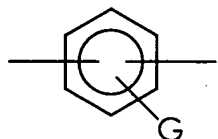
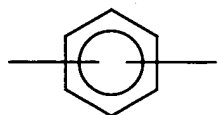




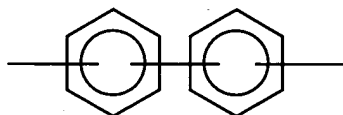
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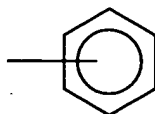
wherein c is 0 or 1; (2) Ar' is

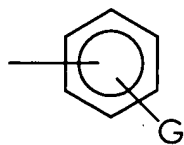


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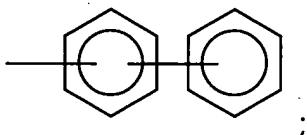


(3) G is an alkyl group selected from alkyl groups containing from about 2 to about 10 carbon atoms; (4) Ar' is

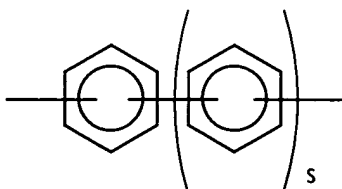
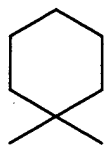
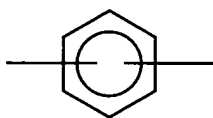
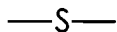
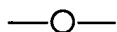
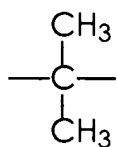
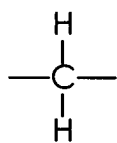




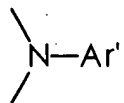
or



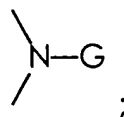
(5) X is



wherein s is 0, 1, or 2,



or



and (6) q is 0 or 1; or mixtures thereof.

70. An imaging member according to claim 69 wherein the imaging member comprises a photogenerating layer comprising from about 5 to about 80 percent by weight of the photogenerating material and from about 20 to about 95 percent by weight of the binder.

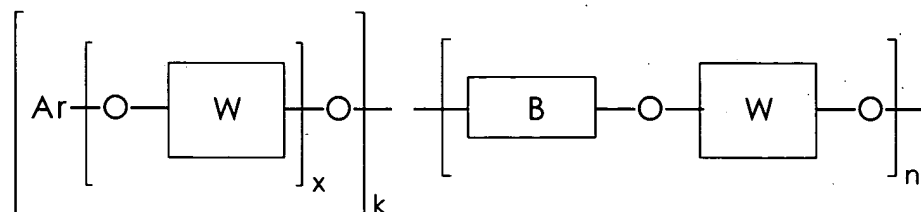
71. An imaging member according to claim 69 wherein the imaging member comprises a photogenerating layer and a charge transport layer, said charge transport layer comprising from about 5 to about 90 percent by weight of a charge transport material and from about 10 to about 95 percent by weight of the binder.

72. An imaging member according to claim 69 wherein the imaging member comprises a photogenerating layer and a charge transport layer, wherein the charge transport material is present in the charge transport layer in an amount of at least about 50 percent by weight.

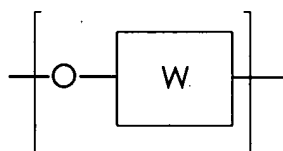
73. An imaging member according to claim 69 comprising (a) a photogenerating layer containing the photogenerating material and (b) a charge transport layer containing the binder.

74. An imaging member according to claim 69 wherein the imaging member comprises a photogenerating layer comprising the photogenerating material and the binder.

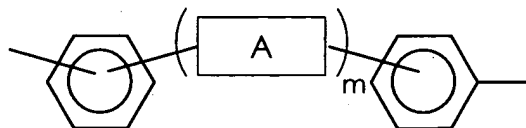
75. An imaging member which comprises a conductive substrate, a photogenerating material, and a binder comprising a branched polyarylene ether copolymer of the formula



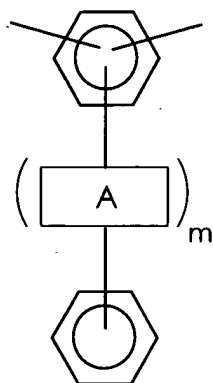
wherein each Ar, independently of the others, is an aryl moiety or an alkylaryl moiety, provided that when Ar is an alkylaryl moiety at least three



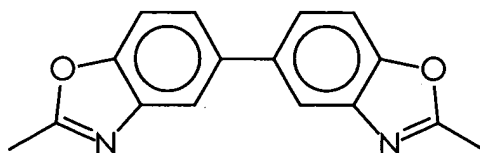
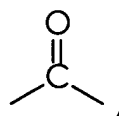
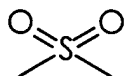
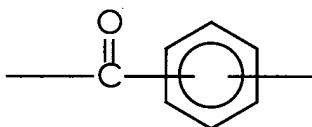
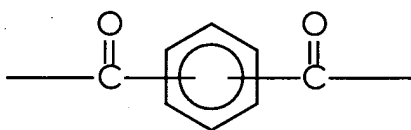
repeating groups are bonded to an aryl portion thereof through the oxygen atoms in the repeating groups, each x, independently of the others, is an integer of 3 or greater, each k and each n, independently of the others, are integers representing the number of repeat monomer units, each W, independently of the others, is

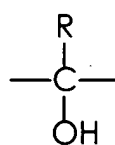
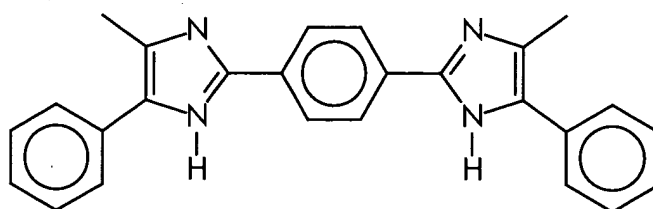
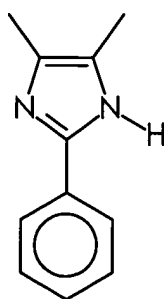
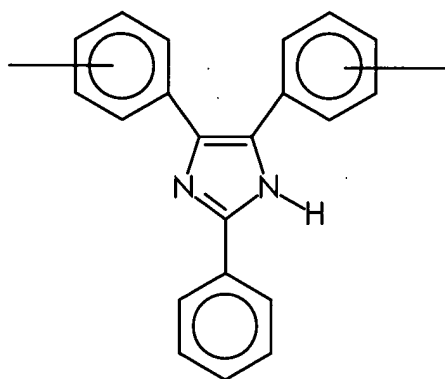


or

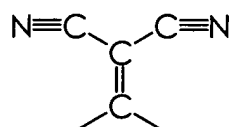


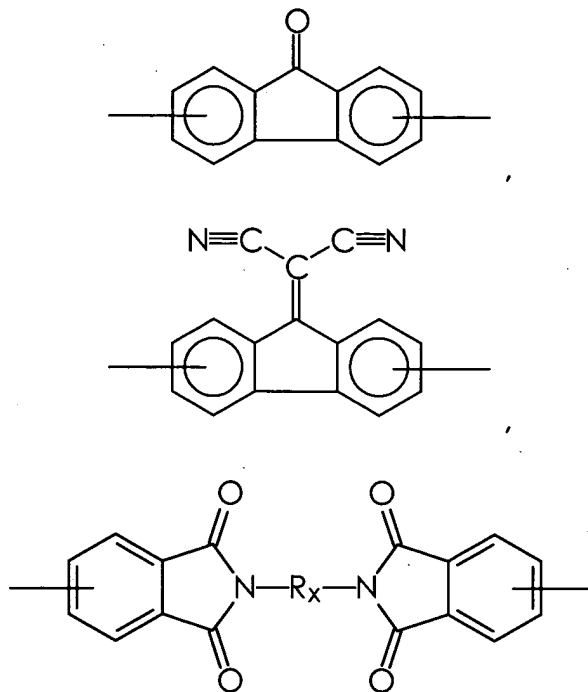
wherein each m , independently of the others, is an integer of 0 or 1,
each A , independently of the others, is



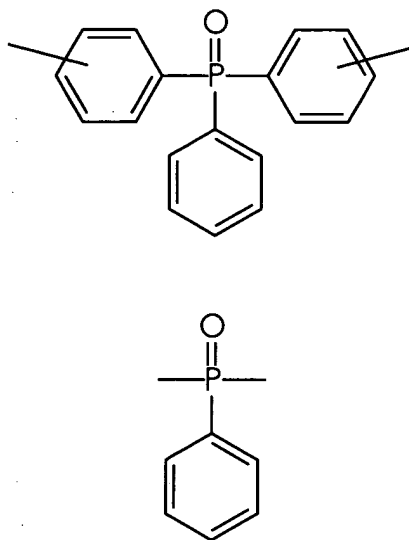


wherein R is a hydrogen atom, an alkyl group, an aryl group, an arylalkyl group, an alkylaryl group, or mixtures thereof,

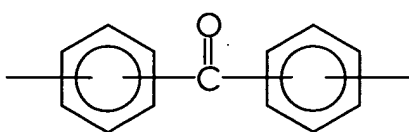
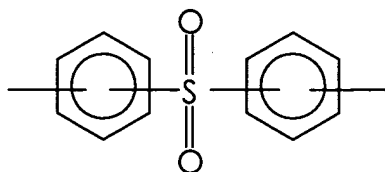
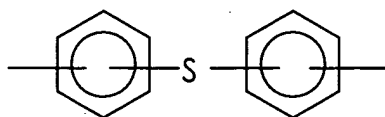
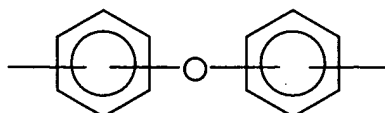
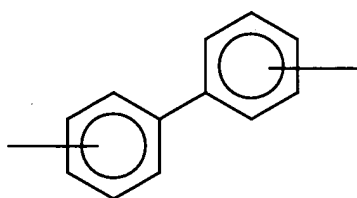
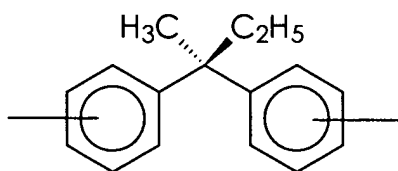
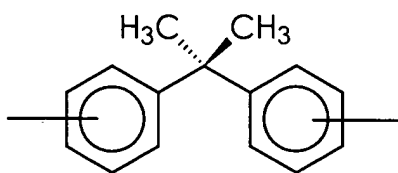
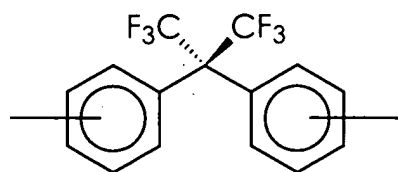


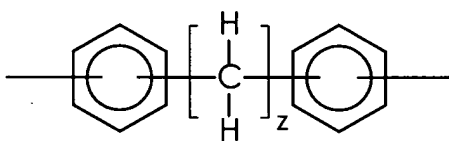
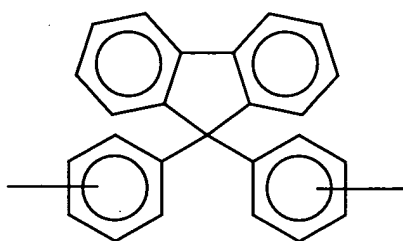
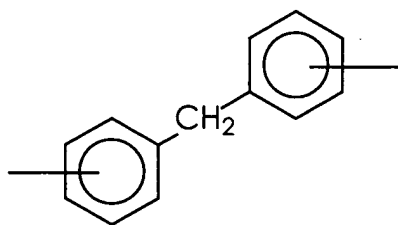
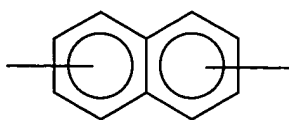
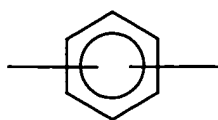


wherein R_x is an alkylene group, an arylene group, an arylalkylene group, an alkylarylene group, or mixtures thereof,

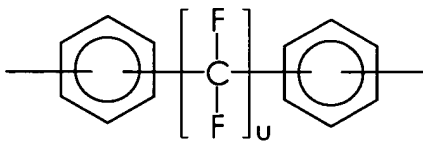


or mixtures thereof, each B, independently of the others, is

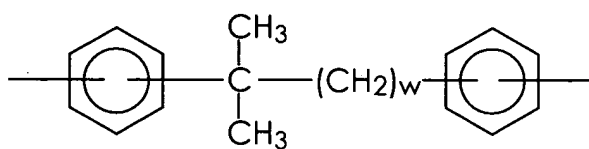
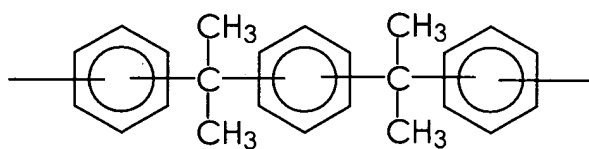
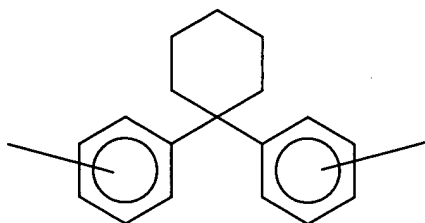
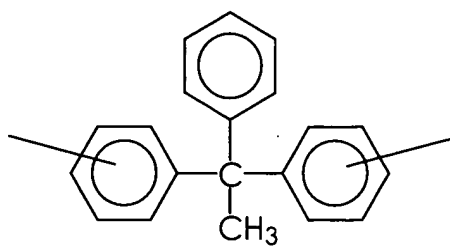




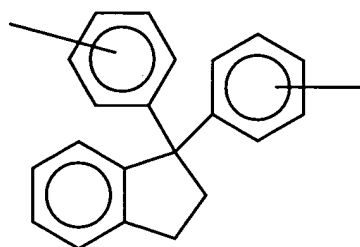
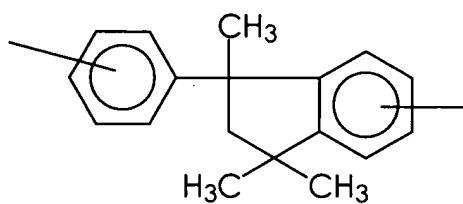
wherein z is an integer of from 2 to about 20,

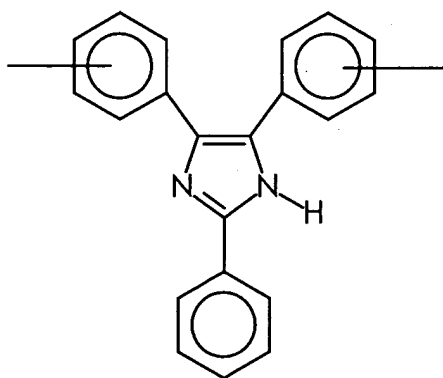
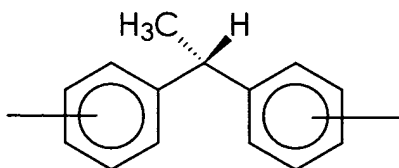
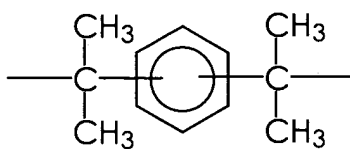
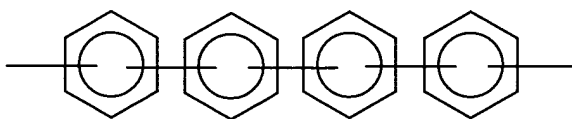
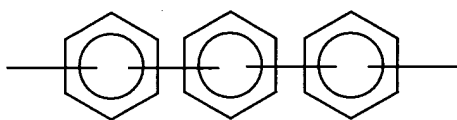
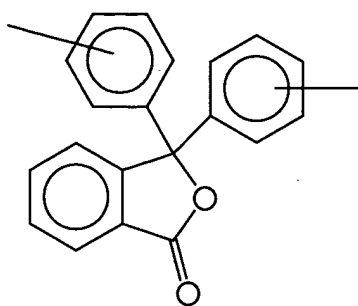


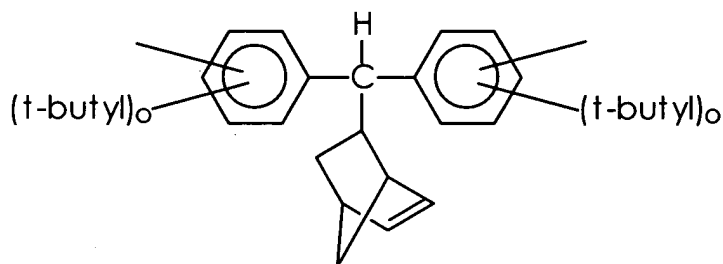
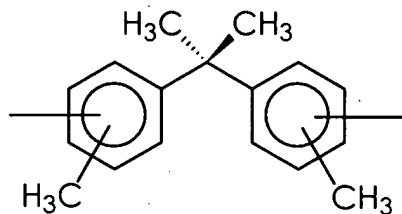
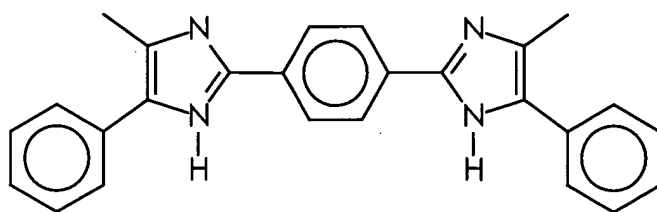
wherein u is an integer of from 1 to about 20,



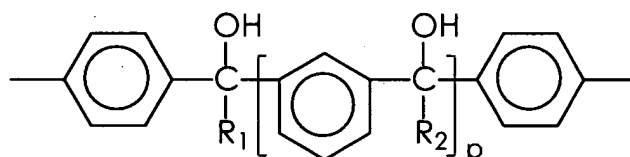
wherein w is an integer of from 1 to about 20,



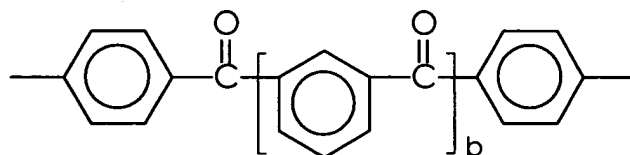




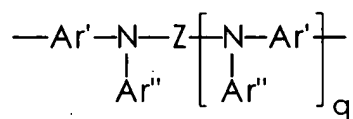
wherein each o, independently of the other, is an integer of 1, 2, 3, or 4,



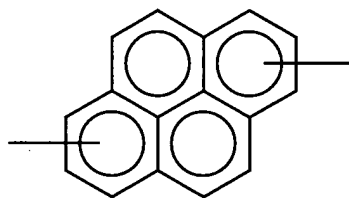
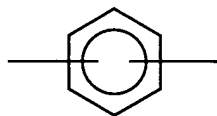
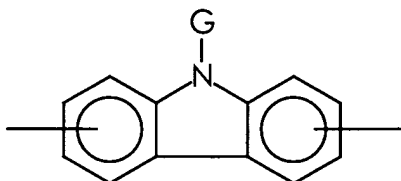
wherein R_1 and R_2 each, independently of the other, are hydrogen atoms, alkyl groups, aryl groups, arylalkyl groups, alkylaryl groups, or mixtures thereof, and p is an integer of 0 or 1,



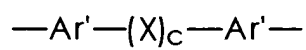
wherein b is an integer of 0 or 1,



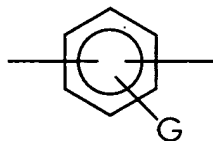
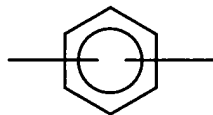
wherein (1) Z is



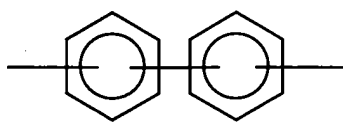
or



wherein c is 0 or 1; (2) Ar' is

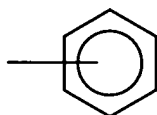


or

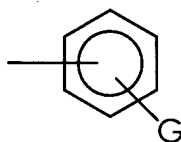


;

(3) G is an alkyl group selected from alkyl groups containing from about 2 to about 10 carbon atoms; (4) Ar'' is

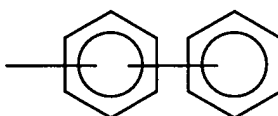


,



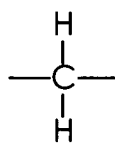
,

or

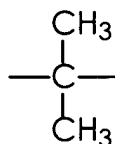


;

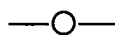
(5) X is



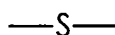
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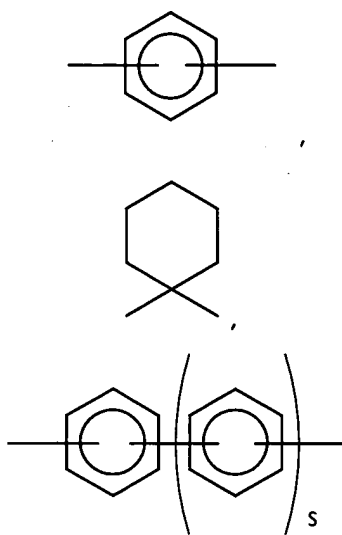
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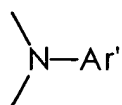
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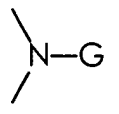
,



wherein s is 0, 1, or 2,



or



and (6) q is 0 or 1; or mixtures thereof.

76. An imaging member according to claim 75 wherein the imaging member comprises a photogenerating layer comprising from about 5 to about 80 percent by weight of the photogenerating material and from about 20 to about 95 percent by weight of the binder.

77. An imaging member according to claim 75 wherein the imaging member comprises a photogenerating layer and a charge transport layer, said charge transport layer comprising from about 5 to about 90 percent by weight of a charge transport material and from about 10 to about 95 percent by weight of the binder.

78. An imaging member according to claim 75 wherein the imaging member comprises a photogenerating layer and a charge transport layer, wherein the charge transport material is present in the charge transport layer in an amount of at least about 50 percent by weight.

79. An imaging member according to claim 75 comprising (a) a photogenerating layer containing the photogenerating material and (b) a charge transport layer containing the binder.

80. An imaging member according to claim 75 wherein the imaging member comprises a photogenerating layer comprising the photogenerating material and the binder.